



SEQUENCE LISTING

<110> INNOGENETICS N.V.

<120> New sequences of hepatitis C virus genotypes and their use as prophylactic, therapeutic and diagnostic agents.

<130> 2551-106

<140> US 09/851,138

<141> 2001-05-09

<150> EP 94870166.9

<151> 1994-10-21

<150> EP 95870076.7

<151> 1995-06-28

<160> 302

<170> PatentIn version 3.1

<210> 1

<211> 327

<212> DNA

<213> hepatitis C virus

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ggccccaggn ngggtgtgcg cgcgactagg aagacttccg agcggtcaca acctcgtggc    180
aggcgacagc ctatccccaa ggctcgycgg yccgagggca ggtcctgggc tcagcccggg    240
tatccttggc cctctatgg caatgagggc tgcgggtggg cgggntgget cctgtccccc    300
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<210> 2
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<213> hepatitis C virus

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1 5 10 15

Arg Arg Pro Xaa Xaa Xaa Xaa Xaa Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Xaa Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Xaa Arg Xaa Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Xaa Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Asn Trp Gly Pro
100 105

<210> 3
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gctttgctgt cctgcttgac ggttccaack accgctcagc aggtgcgcaa cgcacccggg 120
gtgtatcatg tcaccaacga ctgttccaac tcgagcatca tctatgagat ggacgggatg 180

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atcatgcaact acccaggggtg cgtgccctgc gttcggggagg ataaccatct ccgctgctgg 240
atggcgctca cccccacgct tgcggtcaaa aaygctagtg tccccactrc ggcaatccga 300
cgtcacgtcg acttgcttgt tgggggnnc acgttctgtt ccgctatgta cgtgggrgac 360
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Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Xaa Thr Ala
20 25 30

His Glu Val Arg Asn Ala Ser Gly Val Tyr His Val Thr Asn Asp Cys
35 40 45

Ser Asn Ser Ser Ile Ile Tyr Glu Met Asp Gly Met Ile Met His Tyr
50 55 60

Pro Gly Cys Val Pro Cys Val Arg Glu Asp Asn His Leu Arg Cys Trp
65 70 75 80

Met Ala Leu Thr Pro Thr Leu Ala Val Lys Xaa Ala Ser Val Pro Thr
85 90 95

Xaa Ala Ile Arg Arg His Val Asp Leu Leu Val Gly Xaa Xaa Thr Phe
100 105 110

Cys Ser Ala Met Tyr Val Xaa Asp Leu Cys Gly Ser Val Phe Leu Ala
115 120 125

Gly Gln Leu Phe Thr Phe Ser Pro Arg Met His His Thr Thr Gln Glu
130 135 140

Cys Asn Cys Ser Ile
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ggccccaggt tgggtgtgcg cgcgaccagg aagacttccg agcggtcgca gcctcgtgac 180
aggcgacagc ctattcctaa ggctcgccag tccgatggca gnnccctgggc tcagccaggg 240
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cgcggtcttc ggcccagttg gggcccc 327

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Arg Arg Pro Gln Asp Val Lys Xaa Pro Gly Gly Gly Gln Ile Val Gly
 20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
 35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Asp Arg Arg Gln Pro
 50 55 60

Ile Pro Lys Ala Arg Gln Ser Asp Gly Xaa Xaa Trp Ala Gln Pro Gly
 65 70 75 80

His Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
 85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro
 100 105

<210> 7
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 gtatatcatc tcaccaatga ctgttccaac tcgagcatca tctatgagat gagtgggtatg 180
 atcttgcacg ccccaggggtg tgtgccctgc gttcgggaga acaactcttc tcgttgctgg 240
 atgccrctca cccccacgct tgcggtcaaa gacgctaata tccctactgc ggcaatccga 300
 cgccatgtcg acttgctggt tgggacagcc gcgtttcggt ccgctatgta cgtggggggac 360
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Asp Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
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Ile Phe Leu Leu Ala Phe Leu Ser Cys Leu Thr Val Pro Thr Thr Ala
20 25 30

His Glu Val Arg Asn Ala Ser Gly Val Tyr His Leu Thr Asn Asp Cys
35 40 45

Ser Asn Ser Ser Ile Ile Tyr Glu Met Ser Gly Met Ile Leu His Ala
50 55 60

Pro Gly Cys Val Pro Cys Val Arg Glu Asn Asn Ser Ser Arg Cys Trp
65 70 75 80

Met Xaa Leu Thr Pro Thr Leu Ala Val Lys Asp Ala Asn Val Pro Thr
85 90 95

Ala Ala Ile Arg Arg His Val Asp Leu Leu Val Gly Thr Ala Ala Phe
100 105 110

Arg Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val
115 120 125

Gly Gln Leu Phe Thr Phe Ser Pro Arg Leu Tyr His Thr Thr Gln Glu
130 135 140

Cys Asn Cys Ser Ile
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ggccctagat tgggtgtgcg cgcagcgcg g aagacttcgg agcggtcgca acctcgtggg 180
aggcgccaac ctattcccaa ggagcgccga cccgagggca ggt 223

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Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30
Gly Val Tyr Val Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45
Ala Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60
Ile Pro Lys Glu Arg Arg Pro Glu Gly Arg
65 70

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ggccccaggt tgggtgtgcg cgcgacgagg aagacttccg agcgggtcgca acctcgcgga      180
aggcgacagc ctatcccca a ggctcgccga cccgagggca ggtcctgggc tcagcctggg      240
taccatggc ccctctatgc taacgagggc tgcggatggg cgggatggct cctgtcccct      300
cgcggctccc gtccatagctg gggccccaat gacccccgac gtagatcacg caatttgggt      360
aaggtcatcg ataccctaac gtgtggcttc gccgatctca tggggtacat tccgctcgtc      420
ggcgccccc tagggggcgc ttccagaacc ctgncacatg gtgtccgggt cctggcnaggc      480
ggcgtgatnn nnnnnnnnn naaccttcn ggttgccttt tnnctatctt cctcttggcn      540
ttactctctt gcctcacagt cccacacctt gcctatgagg tgcacagcac aaccgatggc      600
taccatgtca ctaatgactg ttccaacggc agcatcgat atgaggcaaa ggacatcatc      660
cttcacagc ctgggtgngt gccctgcata cgggaaggca atatctcccg ttgctgggta      720
ccgctcacc ccacgctcgc agcgcggatc gcgaacgctc ccacgatga ggtgcggcgt      780
cacgtcgacc tccctgtggg ggcagccgtg ttctgctcag ccacgtacat tggggacctt      840
tgtgggggcg tcttcctcgt tgggcaattg ttcaccttca cgtcccggcg gcattggacg      900
gtgcaggact gtaattgttc catttactct ggccacataa cgggccaccg nnnnnnn      957

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<210> 12
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<213> hepatitis C virus

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Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Ala Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu
130 135 140

Gly Gly Ala Ser Arg Thr Leu Xaa His Gly Val Arg Val Leu Xaa Gly
145 150 155 160

Gly Val Xaa Xaa Xaa Xaa Xaa Asn Leu Xaa Gly Cys Ser Xaa Xaa Ile
165 170 175

Phe Leu Leu Xaa Leu Leu Ser Cys Leu Thr Val Pro Thr Ser Ala Tyr
180 185 190

Glu Val His Ser Thr Thr Asp Gly Tyr His Val Thr Asn Asp Cys Ser
195 200 205

Asn Gly Ser Ile Val Tyr Glu Ala Lys Asp Ile Ile Leu His Thr Pro
210 215 220

Gly Xaa Val Pro Cys Ile Arg Glu Gly Asn Ile Ser Arg Cys Trp Val
225 230 235 240

Pro Leu Thr Pro Thr Leu Ala Ala Arg Ile Ala Asn Ala Pro Ile Asp
245 250 255

Glu Val Arg Arg His Val Asp Leu Leu Val Gly Ala Ala Val Phe Cys
260 265 270

Ser Ala Met Tyr Ile Gly Asp Leu Cys Gly Gly Val Phe Leu Val Gly
275 280 285

Gln Leu Phe Thr Phe Thr Ser Arg Arg His Trp Thr Val Gln Asp Cys
290 295 300

Asn Cys Ser Ile Tyr Ser Gly His Ile Thr Gly His Xaa Xaa Xaa
305 310 315

<210> 13
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ggcccagat tgggtgtgag cgcgacgaga aagacttctg aacggtccca gccacgtgga 180
aggcgccagc ccacccctaa agatcggnng gccactggca ggtcctgggg acgtccagga 240
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cgaggctctc 310

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Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Asp Arg Xaa Ala Thr Gly Arg Ser Trp Gly Arg Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly
100 105

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<212> DNA
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gtccctgcg agaatagctc cggtcgggtc cactgttga tcccgatctc gcccaacata      360
gccgtgagca aacctggtgc tctcaccaag ggactgcggg cacgcattga tgccgtcgtg      420
atgtccgcca cctctgctc tgccctgtac gtgggagatg tgtgcggcgc agtgatgata      480
gctgcacagg ctttcatcgt ggcaccgaag cgccattact tcgtccagga atgcaattgc      540
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<210> 16
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Thr Cys Xaa Xaa Ala Asp Leu Met Gly Tyr Xaa Pro Val Val Gly Ala
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Pro Val Gly Gly Xaa Ala Arg Ala Leu Ala Xaa Gly Val Arg Val Leu
20 25 30

Glu Asp Gly Ile Asn Tyr Xaa Thr Gly Asn Leu Pro Gly Cys Ser Phe
35 40 45

Ser Ile Phe Xaa Leu Ala Leu Leu Ser Cys Val Thr Val Pro Val Ser
50 55 60

Xaa Val Glu Val Lys Asn Thr Ser Gln Ala Tyr Met Ala Thr Asn Asp
65 70 75 80

Cys Ser Asn Asn Ser Ile Val Trp Gln Leu Xaa Asp Ala Val Leu His
85 90 95

Val Pro Gly Cys Val Pro Cys Glu Asn Ser Ser Gly Arg Phe His Cys
100 105 110

Trp Ile Pro Ile Ser Pro Asn Ile Ala Val Ser Lys Pro Gly Ala Leu
115 120 125

Thr Lys Gly Leu Arg Ala Arg Ile Asp Ala Val Val Met Ser Ala Thr
130 135 140

Leu Cys Ser Ala Leu Tyr Val Gly Asp Val Cys Gly Ala Val Met Ile
145 150 155 160

Ala Ala Gln Ala Phe Ile Val Ala Pro Lys Arg His Tyr Phe Val Gln
165 170 175

Glu Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met
180 185 190

Ala

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ggccccaggt tgggtgtgcg cgcgccaagg aagacttctg aacggtccca gccacgtgga 180
aggcgccagc ccaccccaaa agatcggcgc gccactggca agtcctgggg acgtccagga 240
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cggggtctc gccctcgtg gggcccaaac gacccccgc acaggtcacg caacttgggt 360
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tacatggcga ctaatgactg tgccaatgac agcatcgtct ggcagctcag ggacgcggtg 660
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cacattgata ccacgtgat gtccgccacc ctctgctctg ccctatacat aggggacctt 840
tgcggcgctg tgatgatagc agcgcaagtt gccgtcgtct caccgcaata ccatactttt 900
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<210> 18
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<400> 18

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Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn

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Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala	35	40	45
Pro Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro	50	55	60
Ile Pro Lys Asp Arg Arg Ala Thr Gly Lys Ser Trp Gly Arg Pro Gly	65	70	75
Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp	85	90	95
Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro	100	105	110
Arg His Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys	115	120	125
Gly Phe Xaa Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Val	130	135	140
Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp	145	150	155
Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile	165	170	175
Phe Leu Leu Ala Leu Leu Ser Cys Ile Thr Val Pro Val Ser Ala Ile	180	185	190
Gln Val Lys Asn Asn Ser His Phe Tyr Met Ala Thr Asn Asp Cys Ala	195	200	205
Asn Asp Ser Ile Val Trp Gln Leu Arg Asp Ala Val Leu His Val Pro	210	215	220
Gly Cys Val Pro Cys Glu Arg Ser Gly Asn Arg Thr Phe Cys Trp Thr	225	230	235
			240

Ala Val Ser Pro Asn Val Ala Val Ser Arg Pro Gly Ala Leu Thr Arg
 245 250 255

Gly Leu Arg Ala His Ile Asp Thr Ile Val Met Ser Ala Thr Leu Cys
 260 265 270

Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Ala Val Met Ile Ala Ala
 275 280 285

Gln Val Ala Val Val Ser Pro Gln Tyr His Thr Phe Val Gln Glu Cys
 290 295 300

Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Xaa
 305 310 315

<210> 19
 <211> 447
 <212> DNA
 <213> hepatitis C virus

<400> 19
 gacggggtaa attatgcaac agggaatctg cctgggttgc ttttctctat cttcttgttg 60
 gctcttctgt cttgtgtcac cgtgcctgtc tctgcctgtc aggttaagaa caccagtacc 120
 atgtacatgg caaccaatga ctgttccaac aacagcatca tctggcaaatt gcagggcgcg 180
 gtgcttcatg ttcttggatg tgtcccggtg gagttgcagg gcaataagtc ccggtgctgg 240
 ataccgggtca ctcccaacgt ggctgtgaac cagcccgggc cctcactag gggcttgctg 300
 acgcacattg acaccatcgt gatggtcgct acgctctgtt ctgcactcta catcggggac 360
 gtgtgtggcg cggatgatgat agctgctcag gttgtcattg tctgcgcgca acatcacaac 420
 ttttcccagg attgcaattg ttccatc 447

<210> 20
 <211> 149
 <212> PRT
 <213> hepatitis C virus

<400> 20

Asp Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1 5 10 15

Ile Phe Leu Leu Ala Leu Leu Ser Cys Val Thr Val Pro Val Ser Ala
20 25 30

Val Gln Val Lys Asn Thr Ser Thr Met Tyr Met Ala Thr Asn Asp Cys
35 40 45

Ser Asn Asn Ser Ile Ile Trp Gln Met Gln Gly Ala Val Leu His Val
50 55 60

Pro Gly Cys Val Pro Cys Glu Leu Gln Gly Asn Lys Ser Arg Cys Trp
65 70 75 80

Ile Pro Val Thr Pro Asn Val Ala Val Asn Gln Pro Gly Ala Leu Thr
85 90 95

Arg Gly Leu Arg Thr His Ile Asp Thr Ile Val Met Val Ala Thr Leu
100 105 110

Cys Ser Ala Leu Tyr Ile Gly Asp Val Cys Gly Ala Val Met Ile Ala
115 120 125

Ala Gln Val Val Ile Val Ser Pro Gln His His Asn Phe Ser Gln Asp
130 135 140

Cys Asn Cys Ser Ile
145

<210> 21

<211> 310

<212> DNA

<213> hepatitis C virus

<400> 21

atgagcaciaa atcctaaacc tcaaagaaaa accaaaagaa acactaaccg ccgcccacag 60

gacgttaagt tcccgggcgg tggccagatc gttggcggag tataacttgtt gccgcgcagg 120

ggcccccggt tgggtgtgcg cgcgacgagg aaaacttccg aacggtccca gccacgtggg 180
 aggcgccagc ccataccctaa agatcgggcg tccactggca aatcctgggg acgtccagga 240
 tacccttggc cctgtatgg gaacgagggc cttggttggg caggatggct cttgtcccct 300
 cgaggtcttc 310

<210> 22
 <211> 48
 <212> PRT
 <213> hepatitis C virus

<400> 22

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
 1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Arg Ser Leu Ala
 20 25 30

Glu Tyr Thr Cys Ala Arg Arg Gly Lys Leu Arg Arg Ser Ser Met Gly
 35 40 45

<210> 23
 <211> 447
 <212> DNA
 <213> hepatitis C virus

<400> 23
 gacgggataa actacgcaac agggaatctg cccggttgc cttttctat cttcttgcg 60
 gccttgcctat cctgtctcac tgtgccggcg tccgctgtgc aggtcaagaa caccagccac 120
 tcttatatgg tgaccaatga ttgctcaaac agcagcattg tctggcagct taaggatgct 180
 gtgcttcacg tccctggatg tgttccatgt gagaggcacc aaaatcagtc tcgctgctgg 240
 atacctgtga cacccaatgt ggccgtgagc caacctggcg cgtcaccag gggtttgcg 300
 acgcacattg acaccatcgt tgcgtctgct accgtctgct cagctttgta tgtggggcgac 360
 ttctgcggcg cagtgatgtt ggtctctcaa tttttcatga tctcccctca gcaccacatc 420

ttcgtccagg attgcaactg ctcgata

447

<210> 24
<211> 149
<212> PRT
<213> hepatitis C virus

<400> 24

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1 5 10 15

Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
20 25 30

Val Gln Val Lys Asn Thr Ser His Ser Tyr Met Val Thr Asn Asp Cys
35 40 45

Ser Asn Ser Ser Ile Val Trp Gln Leu Lys Asp Ala Val Leu His Val
50 55 60

Pro Gly Cys Val Pro Cys Glu Arg His Gln Asn Gln Ser Arg Cys Trp
65 70 75 80

Ile Pro Val Thr Pro Asn Val Ala Val Ser Gln Pro Gly Ala Leu Thr
85 90 95

Arg Gly Leu Arg Thr His Ile Asp Thr Ile Val Ala Ser Ala Thr Val
100 105 110

Cys Ser Ala Leu Tyr Val Gly Asp Phe Cys Gly Ala Val Met Leu Val
115 120 125

Ser Gln Phe Phe Met Ile Ser Pro Gln His His Ile Phe Val Gln Asp
130 135 140

Cys Asn Cys Ser Ile
145

<210> 25

<211> 356
 <212> DNA
 <213> hepatitis C virus

<400> 25
 gacgggataa actatgcaac agggaaacctg cctgggttgc cctttttctat cttcttactg 60
 gccctgcttt cttgcatcac cgtgccggtc tctgccgtgc aagttgcgaa ccgcagtggc 120
 tcttacatgg tgaccaatga ttgctcgaac agcagcatcg tttggcagct cgaggaggcc 180
 gtccttcacg tccctggatg tgttccctgt gagtgggaagg acaacacctc ccgtctctgg 240
 ataccgggtca cccctaacat cgctgtgagc caacctggcg cgcttaccaa gggcctgcgg 300
 acacatattg acatcattgt cgcgtccgcc acgtttctgt ctgccttgta tgtggg 356

<210> 26
 <211> 118
 <212> PRT
 <213> hepatitis C virus

<220>
 <221> MISC_FEATURE
 <222> (95)..(95)
 <223> Xaa represents any amino acid

<400> 26

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
 1 5 10 15

Ile Phe Leu Leu Ala Leu Leu Ser Cys Ile Thr Val Pro Val Ser Ala
 20 25 30

Val Gln Val Ala Asn Arg Ser Gly Ser Tyr Met Val Thr Asn Asp Cys
 35 40 45

Ser Asn Ser Ser Ile Val Trp Gln Leu Glu Glu Ala Val Leu His Val
 50 55 60

Pro Gly Cys Val Pro Cys Glu Trp Lys Asp Asn Thr Ser Arg Cys Trp
 65 70 75 80

Ile Pro Val Thr Pro Asn Ile Ala Val Ser Gln Pro Gly Ala Xaa Thr
85 90 95

Lys Gly Leu Arg Thr His Ile Asp Ile Ile Val Ala Ser Ala Thr Phe
100 105 110

Cys Ser Ala Leu Tyr Val
115

<210> 27
<211> 310
<212> DNA
<213> hepatitis C virus

<220>
<221> misc_feature
<222> (283)..(284)
<223> n represents any nucleotide

<400> 27
atgagcacga atcctaaacc tcaaagaaaa accaaacgta acaccaaccg ccgccccatg 60
gacgttaagt tcccgggtgg tggccagatc gttggcggag tttacttggt gccgcgcagg 120
ggccccaggt tgggtgtgcy cgcgactcgg aagacttcgg agcggtcgca acctcgtggg 180
agacgccaac ctatcccca ggcgcgtcga tccgagggaa ggtcctgggc acagccagga 240
tatccatggc ctctttacgg taatgagggg tgcgggtggg cannatggct cttgtcccc 300
cgcggttctc 310

<210> 28
<211> 117
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (95)..(95)
<223> Xaa represents any amino acid

<400> 28

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Xaa Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg Ser Arg
115

<210> 29

<211> 447

<212> DNA

<213> hepatitis C virus

<400> 29

gacgggatca attttgcaac agggaaacctc cccggttgct ccttttctat ctccctcttg 60

gcactcctct cgtgcctgac tgtccccgct tcggccatca actatcgcaa tgtctcgggc 120

atttactatg tcaccaatga ttgcccgaat tcaagcatag tgtatgaggc cgaccatcac 180

atcttgcaac tcccaggttg cgtgccctgc gtgagagagg ggaatcagtc acgttgctgg 240

gtagccctta cccctaccgt cgcagcgcca tacatcggcg cgccacttga gtctctacgg 300

agtcattgtgg acttgatggg gggggccgcc actgtttgtt cagcccttta catcggggat 360

ttrtgtggyg gcttggtcct agtcgggtcag atgtttcttt tccgaccaag gcgcactgg 420

actactcaag attgcaattg ttccatc 447

<210> 30

<211> 149

<212> PRT

<213> hepatitis C virus

<220>

<221> MISC_FEATURE

<222> (121)..(121)

<223> Xaa represents any amino acid

<220>

<221> MISC_FEATURE

<222> (123)..(123)

<223> Xaa represents any amino acid

<400> 30

Asp Gly Ile Asn Phe Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1 5 10 15

Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
20 25 30

Ile Asn Tyr Arg Asn Val Ser Gly Ile Tyr Tyr Val Thr Asn Asp Cys
35 40 45

Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu
50 55 60

Pro Gly Cys Val Pro Cys Val Arg Glu Gly Asn Gln Ser Arg Cys Trp
65 70 75 80

Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Leu
85 90 95

Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val
 100 105 110

Cys Ser Ala Leu Tyr Ile Gly Asp Xaa Cys Xaa Gly Leu Phe Leu Val
 115 120 125

Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Thr Gln Asp
 130 135 140

Cys Asn Cys Ser Ile
 145

<210> 31
 <211> 447
 <212> DNA
 <213> hepatitis C virus

<400> 31
 gacgggatca attatgcaac agggaacott cccggttget ctttttctat cttcctcttg 60
 gcaactcctct cgtgcctgac tgttcccget tcggccatta actaccgcaa cacctcgggc 120
 atctaccacg tcaccaatga ctgcccgaac togagcatag tttatgaggc cgaccaccac 180
 atcttgcaacc ttccagggtg cgtgccctgc gtgagaactg ggaatcagtc acgttgettg 240
 gtggccctta ctctaccgt cgcagcgcca tacatcggcg caccgcttga gtctctgcgg 300
 agtcatgtgg atctgatggg gggggctgcc actgtttgct cagcccttta catcggggat 360
 ttgtgtggcg gcttgttctt ggttggtcag atgttttctt tccgaccacg acgccactgg 420
 actgcccagg attgcaattg ttctatc 447

<210> 32
 <211> 149
 <212> PRT
 <213> hepatitis C virus

<400> 32
 Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
 1 5 10 15

Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
 20 25 30

Ile Asn Tyr Arg Asn Thr Ser Gly Ile Tyr His Val Thr Asn Asp Cys
 35 40 45

Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu
 50 55 60

Pro Gly Cys Val Pro Cys Val Arg Thr Gly Asn Gln Ser Arg Cys Trp
 65 70 75 80

Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Leu
 85 90 95

Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val
 100 105 110

Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Leu Phe Leu Val
 115 120 125

Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Ala Gln Asp
 130 135 140

Cys Asn Cys Ser Ile
 145

<210> 33
 <211> 447
 <212> DNA
 <213> hepatitis C virus

<400> 33
 gacgggatta attatgcaac aggggaatcctt ccgggttgcct ccttttctat ctctctcttg 60
 gcaattctct cgtgcctgac tgtccccgct tcggccatta actaccacaa cacctcgggc 120
 atctatcata tcaccaacga ctgcccgaat tcaagcatag tgtatgaggc cgaccatcac 180
 atcttgcatc tcccagggttg cgtgccctgc gtgagagtgg ggaatcagtc gagttgctgg 240
 gtggccctta cccctaccat cgcagcgcca tacatcgggc caccgcttga gtccttgccg 300

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agtcacgtgg atctgatggt gggggcggcc actgtctgtt cagcccttta catcggggat 360
ttgtgtggcg gtgcgttctt ggttggtcag atgttctctt tccgaccacg gcgcactgg 420
accacccaag attgcaactg ctccatc 447

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<210> 34
<211> 149
<212> PRT
<213> hepatitis C virus

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<400> 34

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Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1           5           10           15

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Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
20           25           30

```

```

Ile Asn Tyr His Asn Thr Ser Gly Ile Tyr His Ile Thr Asn Asp Cys
35           40           45

```

```

Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu
50           55           60

```

```

Pro Gly Cys Val Pro Cys Val Arg Val Gly Asn Gln Ser Ser Cys Trp
65           70           75           80

```

```

Val Ala Leu Thr Pro Thr Ile Ala Ala Pro Tyr Ile Gly Ala Pro Leu
85           90           95

```

```

Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val
100          105          110

```

```

Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Ala Phe Leu Val
115          120          125

```

```

Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Thr Gln Asp
130          135          140

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```

Cys Asn Cys Ser Ile
145

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<210> 35
<211> 447
<212> DNA
<213> hepatitis C virus

<400> 35
gacgggatca attatgcaac agggaaatatt cccggttgct cyttttctat cttccttytg 60
gcacttctct cgtgtctgac tgtccccgct tcggccacta actatcgcaa cgtctcgggc 120
atctaccatg tcaccaatga ctgcccgaat tcaagcatag tgtatgaggc cgaccatcac 180
atcttagcac ttccagggtg cgtgccctgc gtgagagtgg ggaaccagtc acgctgctgg 240
gtggccctta cccctaccgt cgcagcgcca tacaccgcgg cgcgcgttga gtcctgcgg 300
agtcatgtgg atctgatggg gggagctgcc actgtttgtt cagcccttta catcggggay 360
ttgtgtggcg gcttgttctt ggttggtcag atgttctctt tycagcctcg gcgccactgg 420
actaccagg attgcaattg ttccatc 447

<210> 36
<211> 149
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (14)..(14)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (20)..(20)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (120)..(120)
<223> Xaa represents any amino acid

<220>

<221> MISC_FEATURE
<222> (134)..(134)
<223> Xaa represents any amino acid

<400> 36

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Ile Pro Gly Cys Xaa Phe Ser
1 5 10 15

Ile Phe Leu Xaa Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
20 25 30

Thr Asn Tyr Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys
35 40 45

Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu Ala Leu
50 55 60

Pro Gly Cys Val Pro Cys Val Arg Val Gly Asn Gln Ser Arg Cys Trp
65 70 75 80

Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Thr Ala Ala Pro Leu
85 90 95

Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val
100 105 110

Cys Ser Ala Leu Tyr Ile Gly Xaa Leu Cys Gly Gly Leu Phe Leu Val
115 120 125

Gly Gln Met Phe Ser Xaa Gln Pro Arg Arg His Trp Thr Thr Gln Asp
130 135 140

Cys Asn Cys Ser Ile
145

<210> 37
<211> 447
<212> DNA
<213> hepatitis C virus

<400> 37
gacgggatta attatgcaac agggaaayctc cccggttgct ctttttttat cttcctcttg 60
gcactttctct cgtgcctgac tgtccccgct tcggccacca actaccgcaa tgtctcgggc 120
atttaccatg tcaccaatga ctgcccgat tcaagcatag tgtttgaggc cgaccatcac 180
atcttgcacc ttccaggatg cgtgccctgc gtgaaagagg gaaatcattc acgctgctgg 240
gtggccctta cccctaccgt cgcagcgcca tacatcggcg cgccacttga gtctctacgg 300
agtcattgtg atgtgatggt gggggctgcc actgtttgtt cagcccttta catcggggat 360
ctgtgcggtg gcttgttctt ggttggtcag atgttctctt tccgaccacg gcgccactgg 420
actaccagg aatgcaattg ttccatc 447

<210> 38
<211> 149
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa represents any amino acid

<400> 38

Asp Gly Ile Asn Tyr Ala Thr Gly Xaa Leu Pro Gly Cys Ser Phe Ser
1 5 10 15

Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
20 25 30

Thr Asn Tyr Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys
35 40 45

Pro Asn Ser Ser Ile Val Phe Glu Ala Asp His His Ile Leu His Leu
50 55 60

Pro Gly Cys Val Pro Cys Val Lys Glu Gly Asn His Ser Arg Cys Trp
65 70 75 80

Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Leu
85 90 95

Glu Ser Leu Arg Ser His Val Asp Val Met Val Gly Ala Ala Thr Val
100 105 110

Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Leu Phe Leu Val
115 120 125

Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Thr Gln Glu
130 135 140

Cys Asn Cys Ser Ile
145

<210> 39
<211> 447
<212> DNA
<213> hepatitis C virus

<400> 39
gacgggatca attatgcaac agggaacctc cccggttgct ctttctctat cttcatcctg 60
gcacttctct cgtgcctgac tgtcccggcc tcggctcagc attatcggaa tgtctcgggc 120
atttaccacg tcaccaacga ctgcccgaa tccagcatag tgtatgagtc cgaccatcac 180
atcttacacc taccaggggtg tgtaccctgt gtgaagactg ggaacacttc gcgctgctgg 240
gtggccttaa cacctaccgt ggccgcgccc ataactttcgg ctccacttat gtcggtacgg 300
cggcatgtgg atctgatggt gggcgcagct accctatcgt ctgccctcta cgttgagagac 360
ctctgcgggg gtgccttccct agtggggcag atgttcacct tccagccgcg tcgccactgg 420
actgtccaag actgcaactg ttccatc 447

<210> 40
<211> 149
<212> PRT
<213> hepatitis C virus

<400> 40

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1 5 10 15

Ile Phe Ile Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
20 25 30

Gln His Tyr Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys
35 40 45

Pro Asn Ser Ser Ile Val Tyr Glu Ser Asp His His Ile Leu His Leu
50 55 60

Pro Gly Cys Val Pro Cys Val Lys Thr Gly Asn Thr Ser Arg Cys Trp
65 70 75 80

Val Ala Leu Thr Pro Thr Val Ala Ala Pro Ile Leu Ser Ala Pro Leu
85 90 95

Met Ser Val Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr Leu
100 105 110

Ser Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Gly Ala Phe Leu Val
115 120 125

Gly Gln Met Phe Thr Phe Gln Pro Arg Arg His Trp Thr Val Gln Asp
130 135 140

Cys Asn Cys Ser Ile
145

<210> 41
<211> 957
<212> DNA
<213> hepatitis C virus

<220>
<221> misc_feature
<222> (383)..(383)
<223> n represents any nucleotide

<220>
<221> misc_feature
<222> (924)..(924)
<223> n represents any nucleotide

<220>
<221> misc_feature
<222> (387)..(387)
<223> n represents any nucleotide

<220>
<221> misc_feature
<222> (928)..(928)
<223> n represents any nucleotide

<400> 41
atgagcacac ttccaaaacc ccaaagaaaa accaaaagaa atactaaccg tcgccctatg 60
gacgtcaagt tcccgggcgg cggccagatc gttggtggag tttacttggt gccgcgcagg 120
ggccctcggt tgggtgtgcg cgcgacgaga aagacctcgg aacggtccca gcctagaggc 180
aggcgccagc ccataccaaa ggtacgccag ccgacaggcc gtagctgggg tcaacccggc 240
tacccttggc ccctttatgg caacgagggc tgcggatggg cgggatggct cctgtcccc 300
cgcggtctc gtctaattg gggccccaac gacccccggc gaagggtccg caacttgggt 360
aaggtcacg atacccttac atnccgncta gccgacctca tggggtacat ccctgtccta 420
ggagggcgc ttggcggcgt tgcggctgcc ctggcgcatg gcgttagggc aatcgaggac 480
ggggtcaatt acgcaacagg gaatcttctt ggttgctcct tttctatctt cctcttagca 540
ctgttatcgt gcctcactac accagcctca gcaattcaag tcaagaacgc ctctgggatc 600
taccatotta ccaatgactg ctgaacaac agcatcgttt ttgaggcgga gaccatgata 660
ctgcatcttc caggttgtgt cccatgtatc aaggcgggga atgagtcacg atgttggtc 720
cctgtctccc ccaccttagc cgtccccaac tcatcagtgc caatccacgg gtttcgccga 780
cacgtagacc tcctcgttgg ggcagcggca ttttggtcgg ccattgtacat cggagacctc 840
tgtggtagca taatcttggg agggcagctt tttactttca ggcctaagta ccatcaggtt 900
accaggatt gtaactgctc tatnaacnct ggccacgtca cgggacacag gatggca 957

<210> 42
<211> 319
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (128)..(129)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (308)..(308)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (310)..(310)
<223> Xaa represents any amino acid

<400> 42

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Val Arg Gln Pro Thr Gly Arg Ser Trp Gly Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Asn Trp Gly Pro Asn Asp Pro
 100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Xaa
 115 120 125

Xaa Leu Ala Asp Leu Met Gly Tyr Ile Pro Val Leu Gly Gly Pro Leu
 130 135 140

Gly Gly Val Ala Ala Ala Leu Ala His Gly Val Arg Ala Ile Glu Asp
 145 150 155 160

Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
 165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Thr Pro Ala Ser Ala Ile
 180 185 190

Gln Val Lys Asn Ala Ser Gly Ile Tyr His Leu Thr Asn Asp Cys Ser
 195 200 205

Asn Asn Ser Ile Val Phe Glu Ala Glu Thr Met Ile Leu His Leu Pro
 210 215 220

Gly Cys Val Pro Cys Ile Lys Ala Gly Asn Glu Ser Arg Cys Trp Leu
 225 230 235 240

Pro Val Ser Pro Thr Leu Ala Val Pro Asn Ser Ser Val Pro Ile His
 245 250 255

Gly Phe Arg Arg His Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys
 260 265 270

Ser Ala Met Tyr Ile Gly Asp Leu Cys Gly Ser Ile Ile Leu Val Gly
 275 280 285

Gln Leu Phe Thr Phe Arg Pro Lys Tyr His Gln Val Thr Gln Asp Cys
 290 295 300

Asn Cys Ser Xaa Asn Xaa Gly His Val Thr Gly His Arg Met Ala
 305 310 315

<210> 43
<211> 957
<212> DNA
<213> hepatitis C virus

<220>
<221> misc_feature
<222> (446)..(446)
<223> n represents any nucleotide

<220>
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<222> (467)..(467)
<223> n represents any nucleotide

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<223> n represents any nucleotide

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<223> n represents any nucleotide

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<223> n represents any nucleotide

<220>
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<222> (513)..(514)
<223> n represents any nucleotide

<220>
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<222> (520)..(520)
<223> n represents any nucleotide

<220>
<221> misc_feature
<222> (531)..(531)

<223> n represents any nucleotide

<400> 43

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atgagcacac ttccaaaacc ccaaagaaaa accaaaagaa acaccatccg ccgcccacag      60
gacgtcaagt tcccgggtgg cggccagatc gttggtggag tctacttgct gccgcgcagg      120
ggcccgcgct tgggtgtgcg cgcgacgaga aagacttctg aacggtccca gccagagagt      180
aggcgccaac caatacccaa agtgcgccac caaacgggcc gtacctgggc ccagcccggg      240
tacccttggc ctctttatgg aaatgagggc tgtggttggg caggctggct cctgtccccc      300
cgcggctctc gcccaaattg gggcccaaac gacccccggc ggaggtcccg caacttgggt      360
aaagtcacgc acacccttac ttgcggcttc gccgacctca tggggtatat ccctgtcgta      420
ggcgtccgw tgggaggcgt cgcgngggcc ttggcgcatt gggtcanggn catcgaggac      480
gngttaaatt acgcaacagn gaatcttccc ggnngctctn tctctatctt nctcttggca      540
cttctctcgt gccttacaac accagcctcc gcggcgcatc ataccaacaa gtctggcctg      600
taccatctca ccaacgactg cccaacagc agcatcggtt atgaggcgga gacactgatt      660
ttgcacttgc ctgggtgtgt accttgtgtg aagrtgraca atcaatcccg gtgctgggtg      720
caggcctccc cgacctggc agtgcogaac gcgtctacgc cagtcaccgg gttccgcaaa      780
catgtggaca tcatggtggg cgetgcgcgc ttctgttcag ctatgtatgt gggggacctg      840
tgccgggggc ttttctcgtg tggacagctc ttcacgotca ggctcggat gcatcaggtt      900
gtccaggagt gtaactgttc catctacaca gggcatatca ctggacaccg aatggca      957
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<210> 44

<211> 319

<212> PRT

<213> hepatitis C virus

<220>

<221> MISC_FEATURE

<222> (144)..(144)

<223> Xaa represents any amino acid

<220>

<221> MISC_FEATURE

<222> (149)..(149)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (156)..(157)
<223> Xaa represents any amino acid

<220>
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<222> (161)..(161)
<223> Xaa represents any amino acid

<220>
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<222> (167)..(167)
<223> Xaa represents any amino acid

<220>
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<222> (171)..(172)
<223> Xaa represents any amino acid

<220>
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<222> (174)..(174)
<223> Xaa represents any amino acid

<220>
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<222> (232)..(233)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (177)..(177)
<223> Xaa represents any amino acid

<400> 44

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Ile
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Val Arg His Gln Thr Gly Arg Thr Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Asn Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Xaa
130 135 140

Gly Gly Val Ala Xaa Ala Leu Ala His Gly Val Xaa Xaa Ile Glu Asp
145 150 155 160

Xaa Val Asn Tyr Ala Thr Xaa Asn Leu Pro Xaa Xaa Ser Xaa Ser Ile
165 170 175

Xaa Leu Leu Ala Leu Leu Ser Cys Leu Thr Thr Pro Ala Ser Ala Ala
180 185 190

His Tyr Thr Asn Lys Ser Gly Leu Tyr His Leu Thr Asn Asp Cys Pro
195 200 205

Asn Ser Ser Ile Val Tyr Glu Ala Glu Thr Leu Ile Leu His Leu Pro
210 215 220

Gly Cys Val Pro Cys Val Lys Xaa Xaa Asn Gln Ser Arg Cys Trp Val
225 230 235 240

Gln Ala Ser Pro Thr Leu Ala Val Pro Asn Ala Ser Thr Pro Val Thr
245 250 255

Gly Phe Arg Lys His Val Asp Ile Met Val Gly Ala Ala Ala Phe Cys
260 265 270

Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Gly Leu Phe Leu Val Gly
275 280 285

Gln Leu Phe Thr Leu Arg Pro Arg Met His Gln Val Val Gln Glu Cys
290 295 300

Asn Cys Ser Ile Tyr Thr Gly His Ile Thr Gly His Arg Met Ala
305 310 315

<210> 45
<211> 413
<212> DNA
<213> hepatitis C virus

<220>
<221> misc_feature
<222> (302)..(302)
<223> n represents nucleotide

<220>
<221> misc_feature
<222> (340)..(340)
<223> n represents nucleotide

<220>
<221> misc_feature
<222> (384)..(384)
<223> n represents nucleotide

<400> 45

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atgagcacac ttcctaaacc tcaaagaaaa accaaaacgaa acaccaaccg tcgcccacag      60
gacgtcaagt tcccgggtgg cggtcagatc gttggtggag tttacttgtt gccgcgcagg      120
ggccctcggt tgggtgtgcg cgcgacgagg aaaacttctg aacggtccca gcccaggggt      180
agacgccaac ctataccgaa ggtgcgtcac caaacggggc gtacctgggc tcaacccggg      240
tacccttggc ctctttatgg gaatgagggg tgtggctggg caggggtggc cctgtcccc      300
cncggctctc gcctaattg gggccctaata gacccccggn ggaggtccc caacctgggt      360

aaggtcatcg atacccttac ttgnnggsttc gccgacctca tagagtacat tcc          413

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<210> 46
<211> 137
<212> PRT
<213> hepatitis C virus

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<220>
<221> MISC_FEATURE
<222> (101)..(101)
<223> Xaa represents any amino acid

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<220>
<221> MISC_FEATURE
<222> (114)..(114)
<223> Xaa represents any amino acid

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<220>
<221> MISC_FEATURE
<222> (128)..(129)
<223> Xaa represents any amino acid

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<400> 46

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Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1           5           10           15

```

```

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20           25           30

```

```

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala

```

35	40	45
Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro		
50	55	60
Ile Pro Lys Val Arg His Gln Thr Gly Arg Thr Trp Ala Gln Pro Gly		
65	70	75
		80
Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp		
	85	90
		95
Leu Leu Ser Pro Xaa Gly Ser Arg Pro Asn Trp Gly Pro Asn Asp Pro		
	100	105
		110
Arg Xaa Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Xaa		
	115	120
		125
Xaa Phe Ala Asp Leu Ile Glu Tyr Ile		
130	135	

<210> 47
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<220>
 <221> misc_feature
 <222> (324)..(324)
 <223> n represents any nucleotide

<220>
 <221> misc_feature
 <222> (340)..(340)
 <223> n represents any nucleotide

<220>
 <221> misc_feature
 <222> (455)..(455)
 <223> n represents any nucleotide

<400> 47
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gatgtcaagt tcccgggcgg cggtcagatc gttggtggag tctacttggt accgcgcagg 120
ggcccacgtt tgggtgtgcg cgcgacgagg aagacttcgg aacggtccca ggccagaggt 180
agggcgccaac caatacccaa ggtgcgccag aaccaaggcc gaacctgggc tcagcctggg 240

tacccttggc ccctttatgg gaacgagggc tgcggctggg cggggtggct cttgtccccc 300
cgtggctctc gcccggaactg gggncccaat gacccccgn ggaggtcccg caacctgggt 360
aaggtcatcg acacctcac ttgcggcttc gccgacctca tggagtacat ccctgtcgtt 420
ggcgcccccc ttggaggcgt tgcggcgga ctggnacatg gtgtcagggc catcgaggac 480
gggataaact atgcaacagg gaatcttctt ggttgcctt tctctatctt ccwcttggca 540
cttctctcgt gcctcaccac gcctgcctcc gcactaaact atgctaacaa gtctgggctg 600
tatcatctaa ccaatgactg cccaatagc agcatttgt atgaggcgaa tggcatgatc 660
ctgcatctcc cgggttgctg cccctgcgtg aagaccggca acctgaccaa gtgttgctg 720
tcggcctccc cgacattggc ggtgcagaat gcgtcgggtg ccatcagggg tgtccgcgag 780
cacgtggacc tcttggtggg tgetgctgcg ttctgctctg ccatgtacgt gggcgactta 840
tgcggtgggc tctttctcgt tgggcagttg ttcacgttca gaccaggat gtatgagatc 900
gcccaggact gcaactgttc catctatgca ggccacatca ctgggcaccg gatggcg 957

<210> 48
<211> 319
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (108)..(108)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (114)..(114)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE

<222> (152)..(152)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (178)..(178)
<223> Xaa represents any amino acid

<400> 48

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Ala Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Val Arg Gln Asn Gln Gly Arg Thr Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Asp Trp Xaa Pro Asn Asp Pro
100 105 110

Arg Xaa Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Glu Tyr Ile Pro Val Val Gly Ala Pro Leu
130 135 140

Gly Gly Val Ala Ala Glu Leu Xaa His Gly Val Arg Ala Ile Glu Asp
145 150 155 160

Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Xaa Leu Ala Leu Leu Ser Cys Leu Thr Thr Pro Ala Ser Ala Leu
180 185 190

Asn Tyr Ala Asn Lys Ser Gly Leu Tyr His Leu Thr Asn Asp Cys Pro
195 200 205

Asn Ser Ser Ile Val Tyr Glu Ala Asn Gly Met Ile Leu His Leu Pro
210 215 220

Gly Cys Val Pro Cys Val Lys Thr Gly Asn Leu Thr Lys Cys Trp Leu
225 230 235 240

Ser Ala Ser Pro Thr Leu Ala Val Gln Asn Ala Ser Val Ser Ile Arg
245 250 255

Gly Val Arg Glu His Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys
260 265 270

Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Gly Leu Phe Leu Val Gly
275 280 285

Gln Leu Phe Thr Phe Arg Pro Arg Met Tyr Glu Ile Ala Gln Asp Cys
290 295 300

Asn Cys Ser Ile Tyr Ala Gly His Ile Thr Gly His Arg Met Ala
305 310 315

<210> 49
<211> 309
<212> DNA
<213> hepatitis C virus

<400> 49
atgagcacac ttccctaaacc acaaagaaaa accaaaagaa acaccaaccc cggccacagg 60
acgttaagtt cccaggcggc ggtcagatcg ttggtggagt ttacgtgcta ccacgcaggg 120
gccccagtt ggggtgtgct gcagtgcgca agacttcoga gcggtcgcaa cctcgcagta 180
ggcgccaacc catccccagg gcgcgcgcaa ccgagggcag gtccctgggct cagcccggt 240

acccttggcc cctatatggg aatgagggct gcgggtgggc aggggtggctc ctgtccccgc 300
gcggctctc 309

<210> 50
<211> 115
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> Xaa represents any amino acid

<400> 50

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Xaa Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Val Leu Pro Arg Arg Gly Pro Gln Leu Gly Val Arg Ala
35 40 45

Val Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Ser Arg Arg Gln Pro
50 55 60

Ile Pro Arg Ala Arg Arg Thr Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg
115

<210> 51
<211> 447
<212> DNA
<213> hepatitis C virus

<400> 51
gacggaatta atttcgcaac agggaattta cctgggttget ctttctctat cttocttctg 60
gctttgttct catgcttgct tacacccaca gccgggctgg agtaccgtaa tgcctccgga 120
ctctacatgg taactaacga ctgcagtaac ggtagtatcg tgtatgaggc cggggatatt 180
atcctccact tacctggctg tgtccctctg gtacgctctg gcaatacatc aagatgctgg 240
atccctgtga gcccyaccgt cgcctggaag tcgccctgcg ccgccaccgc ctctctccgc 300
acgcacgtgg atatgatggg gggrgcgggc accctatgct cagctctcta cgtaggagac 360
ctttgtggag cgtatcttct tgytyggcag gggttctcat ggagacatcg ccagcattgg 420
actgtccagg actgcaactg ttccatc 447

<210> 52
<211> 149
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (85)..(85)
<223> Xaa represents Pro

<220>
<221> MISC_FEATURE
<222> (108)..(108)
<223> Xaa represents Gly

<220>
<221> MISC_FEATURE
<222> (128)..(128)
<223> Xaa represents Val

<400> 52

Asp Gly Ile Asn Phe Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1 5 10 15

Ile Phe Leu Leu Ala Leu Phe Ser Cys Leu Leu Thr Pro Thr Ala Gly
20 25 30

Leu Glu Tyr Arg Asn Ala Ser Gly Leu Tyr Met Val Thr Asn Asp Cys
35 40 45

Ser Asn Gly Ser Ile Val Tyr Glu Ala Gly Asp Ile Ile Leu His Leu
50 55 60

Pro Gly Cys Val Pro Cys Val Arg Ser Gly Asn Thr Ser Arg Cys Trp
65 70 75 80

Ile Pro Val Ser Xaa Thr Val Ala Val Lys Ser Pro Cys Ala Ala Thr
85 90 95

Ala Ser Leu Arg Thr His Val Asp Met Met Val Xaa Ala Ala Thr Leu
100 105 110

Cys Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Ala Leu Phe Leu Xaa
115 120 125

Gly Gln Gly Phe Ser Trp Arg His Arg Gln His Trp Thr Val Gln Asp
130 135 140

Cys Asn Cys Ser Ile
145

<210> 53

<211> 340

<212> DNA

<213> hepatitis C virus

<400> 53

ctcgacagtt actgagaatg acatccgtgt cgaggaatca atataccaat gttgtgactt 60

ggcccccgag gctcgcaagg ccataaagtc gctcaccgag cggctgtaca tcggggggccc 120

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yctaaccaat tcaaaaggac agaactgcgg ctaccgtcgg tgccgcgccca gcggcgtgct      180
gactaccagc tgcggcaaca ccctgacatg ctacttgaaa gccagagcgg cctgtcgagc      240
tgcaaagctc cgggactgca ccatgctcgt gtgcggggat gaccttgctg ttatctgtga      300
gagtgcggga gtcgaggaag acgcggcgaa cctacgagct      340

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```

<210> 54
<211> 113
<212> PRT
<213> hepatitis C virus

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<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> Xaa represents any amino acid

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<400> 54

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Ser Thr Val Thr Glu Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr Gln
1          5          10          15

```

```

Cys Cys Asp Leu Ala Pro Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20          25          30

```

```

Glu Arg Leu Tyr Ile Gly Gly Xaa Leu Thr Asn Ser Lys Gly Gln Asn
35          40          45

```

```

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50          55          60

```

```

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Arg Ala Ala Cys Arg Ala
65          70          75          80

```

```

Ala Lys Leu Arg Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85          90          95

```

```

Val Ile Cys Glu Ser Ala Gly Val Glu Glu Asp Ala Ala Asn Leu Arg
100         105         110

```

Ala

<210> 55
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 55
 ctcgacagtt actgagaacg acatccgtac cgaggratca atctatcaat gttgtgactt 60
 ggccccygag gcccgcaagg ccataaagtc gtcaccgag cggctgtacg tcggggggccc 120
 cctaaccaat tcaaaggggc agaactgcgg ctatcgtcgg tgcgcgcta gcggcgtgct 180
 gaccaccagc tgcggcaaca cctcacatg ctacttgaaa gccagggcgg cctgtcgagc 240
 tgcaaagctc caggactgca cgatgctcgt gtgcggagac gaccttgctg ttatctgtga 300
 gagcgcggga gtcgaggagg acgcggcgaa cctacgagtc 340

<210> 56
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<220>
 <221> MISC_FEATURE
 <222> (12)..(12)
 <223> Xaa represents any amino acid

<220>
 <221> MISC_FEATURE
 <222> (22)..(22)
 <223> Xaa represents any amino acid

<400> 56
 Ser Thr Val Thr Glu Asn Asp Ile Arg Thr Glu Xaa Ser Ile Tyr Gln
 1 5 10 15
 Cys Cys Asp Leu Ala Xaa Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
 20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn
 35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
 50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Arg Ala Ala Cys Arg Ala
 65 70 75 80

Ala Lys Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Val Ile Cys Glu Ser Ala Gly Val Glu Glu Asp Ala Ala Asn Leu Arg
 100 105 110

Val

<210> 57
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 57
 ctgcacagtt actgagaacg acattcgtgt cgaggaatca atctaccagt gctgtgactt 60
 ggcccccgag gcccgcaagg ccataaagtc gctcaccgag cggctgtata tcgggggtcc 120
 cctaaccaac tcaaaagggc agaactgcgg ctaccgtcgg tgccgcgccca ggcgcgtgct 180
 gactaccagc tgcggttaata ccctcacatg ttacttgaaa gccagggcgg cctgtcgagc 240
 tgcgaagctc caggactgca caatgctcgt gtgcggagac gaccttgtcg ttatctgtga 300
 gagtgcrgha gtcgaggagg atgcggcgaa cctacgagtc 340

<210> 58
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<220>
 <221> MISC_FEATURE

<222> (102)..(102)
<223> Xaa represents any amino acid

<400> 58

Ser Thr Val Thr Glu Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Ala Pro Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Ile Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Arg Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Xaa Gly Val Glu Glu Asp Ala Ala Asn Leu Arg
100 105 110

Val

<210> 59
<211> 652
<212> DNA
<213> hepatitis C virus

<220>
<221> misc_feature
<222> (524)..(524)
<223> n represents any nucleotide

<220>
<221> misc_feature

<222> (625)..(625)

<223> n represents any nucleotide

<400> 59

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cgtacagcct ccaggacccc ccctcccggg agagccatag tggctctcgg aaccggtgag      60
tacaccggaa ttgccaggac gaccgggtcc tttcttggat caaccgctc aatgcctgga      120
gatttgggcg tgcccccgca agactgctag ccgagtagtg ttgggtcgcg aaaggccttg      180
tggtagctgc tgataggggtg cttgcgagtg ccccgggagg tctcgtagac cgtgcaccat      240
gagcacgaat cctaaacctc aaagaaaaac caaaagaaac accaaccgcc gccacagga      300
cgtcaagttc ccgggcgggtg gccagatcgt tggtaggagtc tacgtgctac cgcgcagggg      360
ccctagattg ggtgtgcgcg cagcgcggaa gacttcggag cggtcgcaac ctctgtgggag      420
gcgccaacct attcccaagg agcgcgcgacc cgagggcagg tcctgggcgc agcccgggta      480
cccctggccc ctctatggta acgagggctg cgggtgggca ggtnggctcc tgtcccctcg      540
cggctcccggt cctagttggg gtctactga ccccggcgt aggtcacgca atttgggtaa      600
ggtcacgat accctcacgt gttgnttcgc cgacctcatg ggtacatac cg                652
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<210> 60

<211> 138

<212> PRT

<213> hepatitis C virus

<220>

<221> MISC_FEATURE

<222> (96)..(96)

<223> Xaa represents any amino acid

<220>

<221> MISC_FEATURE

<222> (129)..(129)

<223> Xaa represents any amino acid

<400> 60

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Val Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Ala Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Glu Arg Arg Pro Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Xaa
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Xaa Phe Ala Asp Leu Met Gly Tyr Ile Pro
130 135

<210> 61
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 61
ctcaacggtc actgaagctg atatccgaac agaggagtcc atataccaat gctgtgacct 60
gcaccccgaa gcacgtgtag ccatcaagtc tttgactgaa aggctgtacg tcggggggcc 120
cttgaccaat tcaaaagggg agaactgcgg ctatcgaga tgccgtgcca gcggcgtctt 180
gacaaccagc tgccgcaaca ccctcacctg ctatatcaag gccctagcag cctgtagagc 240
tgccaagctc caggactgca ccatgctcgt ctgtggcgac gacctggtcg tgatctgcga 300

gagtgtaggg acccaggagg atgcggcgag cctgcgagcc

340

<210> 62
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 62

Ser Thr Val Thr Glu Ala Asp Ile Arg Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu His Pro Glu Ala Arg Val Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Lys Gly Glu Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Ile Lys Ala Leu Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Val Gly Thr Gln Glu Asp Ala Ala Ser Leu Arg
100 105 110

Ala

<210> 63
<211> 340
<212> DNA
<213> hepatitis C virus

<220>
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<220>
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<223> n represents any nucleotide

<220>
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<222> (330)..(340)
<223> n represents any nucleotide

<400> 63
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agaccccgag gctcgcaagg ccataaggtc cctcacagag aggcctttata tcgggggtcc 120
cctgacaaac tcaaaagggc agaactgcgg ctaccgcga tgccgtgcaa gcggcgctct 180
gacgactagc tgccgcaaca ccctcacctg ttacataaag gccagggcag cctgtcgagc 240
tgccaagctc caggattgct caatgctcgt ctgtggcgac gaccttgctg ttatctgcga 300
gatcgagggg ntccangagg atccgtcgan nnnnnnnnnn 340

<210> 64
<211> 113
<212> PRT
<213> hepatitis C virus

<220>
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<222> (104)..(105)
<223> Xaa represents any amino acid

<220>
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<222> (110)..(113)
<223> Xaa represents any amino acid

<400> 64

Ser Thr Val Thr Glu Ser Asp Ile Arg Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Asp Pro Glu Ala Arg Lys Ala Ile Arg Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Ile Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Gln Asp Cys Ser Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ile Glu Gly Xaa Xaa Glu Asp Pro Ser Xaa Xaa Xaa
100 105 110

Xaa

<210> 65
<211> 831
<212> DNA
<213> hepatitis C virus

<220>
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<222> (779)..(779)
<223> n represents any nucleotide

<400> 65

cgtagaccgt gcaccatgag cacgaatcct aaacctcaaa gaaaaaccaa acgtaacatc 60
 aaccgcgcgc cacaggacgt caagttcccg ggcgggtggcc agatcgtcgg tggagtttac 120
 ctgttgccgc gcaggggccc tagattgggt gtgcgcgcga ctaggaagac ttccgagcgg 180
 tcgcaacctc gtggggaggc acagcctatc cccaaggctc gccgatccga gggcaggctc 240
 tgggctcagc cggggtacct ttggcccttc tatggcaatg agggcatggg ttgggcaggg 300
 ttgctcctgt ccccccattg ctcccgccct agttggggcc cttcagacct ccggcgtagg 360
 tcgcgtaatt tgggtaaggt catcgatacc ctcacatgcg gcttcgcga cctcatgggg 420
 tacattccgc tcgtcggcgc cccctaggg ggcgttgcca gggccctggc gcaaggcttc 480
 cgggatctac cagtcacca acgattgttc caatgggagc attgtgtatg aggcggaagg 540
 catgatcatg catctccccg ggtgcgtgcc ctgcgttcgg gaaggtaata tctctcgttg 600
 ctgggtaccg ttttccccca cgtcgcagc caggaatgct agcgtcccca ctcaggcaat 660
 tcggcgacac gtgcacttgc ttgttggggc ggccacactc tgttctgcta tgtatgtggg 720
 ggacctctgt gggtcctgt tctcgtcgg ccaactgttc accttcacaw ccgccagna 780
 ctacacagtg caagactgca attgttccat ctaccccggc catataacgg g 831

<210> 66
 <211> 158
 <212> PRT
 <213> hepatitis C virus

<400> 66

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Ile Asn
 1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
 20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
 35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
 50 55 60

Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln Pro Gly

65		70		75		80									
Tyr	Pro	Trp	Pro	Leu	Tyr	Gly	Asn	Glu	Gly	Met	Gly	Trp	Ala	Gly	Trp
				85					90					95	
Leu	Leu	Ser	Pro	His	Gly	Ser	Arg	Pro	Ser	Trp	Gly	Pro	Ser	Asp	Pro
			100					105					110		
Arg	Arg	Arg	Ser	Arg	Asn	Leu	Gly	Lys	Val	Ile	Asp	Thr	Leu	Thr	Cys
			115				120					125			
Gly	Phe	Ala	Asp	Leu	Met	Gly	Tyr	Ile	Pro	Leu	Val	Gly	Ala	Pro	Leu
	130					135					140				
Gly	Gly	Val	Ala	Arg	Ala	Leu	Ala	Gln	Gly	Phe	Arg	Asp	Leu		
145					150					155					

<210> 67
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<220>
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 <223> n represents any nucleotide

<220>
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 <222> (334)..(340)
 <223> n represents any nucleotide

<400> 67	
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tctcaccaac tcaaaaggac agaactgcgg ctatcgccgg tgccgtgcga gcggtgtgct	180
gactactagc tgcggtaaca cctcacatg ctacctgaaa gccgccgcgg cctgtcgagc	240
tgcaaagctc cgggaatgca caatgctcgt gtgtggcgac gacctcgtcg ttatctgtga	300

gagtgcgggg gtccaggagg atgctgcaag cctnnnnnnn

340

<210> 68
<211> 113
<212> PRT
<213> hepatitis C virus

<220>
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<223> Xaa represents any amino acid

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<223> Xaa represents any amino acid

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<222> (111)..(113)
<223> Xaa represents any amino acid

<400> 68

Xaa Xaa Val Thr Glu Ser Asp Ile Arg Val Glu Xaa Ser Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Ala Pro Glu Ala Arg Val Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Arg Glu Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Xaa Xaa
 100 105 110

Xaa

<210> 69
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<220>
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 <222> (28)..(28)
 <223> n represents any nucleotide

<220>
 <221> misc_feature
 <222> (336)..(340)
 <223> n represents any nucleotide

<400> 69
 ctcgacagtc acagagagag atataagnac tgaggagtcc atataccagg cttgttcctt 60
 acccgagcag gccagaactg ccatacactc attgactgag agactctacg taggagggcc 120
 catgatgaac agcaaagggc aatcctgcgg atacaggeat tgccgcgccca ggggagtgct 180
 caccaccagt atggggaata ccatacagtg ctacatcaag gccctagcgg cttgttaaagc 240
 agcaggaata gtggccccca ccatacctggt gtgcggcgat gacctagttg tcatactcaga 300
 gagtcaggga gtcgaggagg acgaccggaa cctgannnnn 340

<210> 70
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<220>
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 <222> (9)..(9)
 <223> Xaa represents any amino acid

<220>
<221> MISC FEATURE
<222> (112)..(113)
<223> Xaa represents any amino acid

<400> 70

Ser Thr Val Thr Glu Arg Asp Ile Xaa Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15

Ala Cys Ser Leu Pro Glu Gln Ala Arg Thr Ala Ile His Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Met Asn Ser Lys Gly Gln Ser
35 40 45

Cys Gly Tyr Arg His Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Met
50 55 60

Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Leu Ala Ala Cys Lys Ala
65 70 75 80

Ala Gly Ile Val Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Gln Gly Val Glu Glu Asp Asp Arg Asn Leu Xaa
100 105 110

Xaa

<210> 71
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 71

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acccgagcag gcccggaactg ccatacatte attaaactgag agactttacg tgggagggcc      120
catgatgaac agcaaagggc agtcctgcgg atacaggcgt tgccgcgcta gcggagtgt      180
caccaccagt atggggaaca ccatacctg ttatgtgaaa gccctgcag cttgtaaagc      240
tgccggcatt gttgccccca cgatgctggt gtgcggcgat gacctggttg tcatctcaga      300
gagtcagggg gctgaggagg acgagcgaaa cctgagagtc      340

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<210> 72
<211> 113
<212> PRT
<213> hepatitis C virus

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<400> 72

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Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Leu
1           5           10           15

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Ala Cys Ser Leu Pro Glu Gln Ala Arg Thr Ala Ile His Ser Leu Thr
          20           25           30

```

```

Glu Arg Leu Tyr Val Gly Gly Pro Met Met Asn Ser Lys Gly Gln Ser
          35           40           45

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Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Met
          50           55           60

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Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Leu Ala Ala Cys Lys Ala
65           70           75           80

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Ala Gly Ile Val Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
          85           90           95

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Val Ile Ser Glu Ser Gln Gly Ala Glu Glu Asp Glu Arg Asn Leu Arg
          100          105          110

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Val

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<210> 73
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 73
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 acccgagcaa gcccgaaactg ccatacatto attgactgag agactttacg taggaggggc 120
 catgatgaac agcaagggac agtcctgcgg ttacagacgt tgccgcgcca gcggagtgtt 180
 caccaccagc atggggaata ccatcacatg ctatgtgaag gcattagctg cctgcaaagc 240
 tgcaggcatc gttgctccca cgatgctggt ttgtggcgac gatctggtca tcatctcaga 300
 gagtcaggga accgaggagg atgagcgga cctgagagtc 340

<210> 74
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<400> 74
 Ser Thr Val Ala Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Leu
 1 5 10 15
 Ala Cys Ser Leu Pro Glu Gln Ala Arg Thr Ala Ile His Ser Leu Thr
 20 25 30
 Glu Arg Leu Tyr Val Gly Gly Pro Met Met Asn Ser Lys Gly Gln Ser
 35 40 45
 Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Met
 50 55 60
 Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Leu Ala Ala Cys Lys Ala
 65 70 75 80
 Ala Gly Ile Val Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Ile Ile Ser Glu Ser Gln Gly Thr Glu Glu Asp Glu Arg Asn Leu Arg
100 105 110

Val

<210> 75
<211> 1195
<212> DNA
<213> hepatitis C virus

<220>
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<223> n represents any nucleotide

<220>
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<222> (7)..(7)
<223> n represents any nucleotide

<220>
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<222> (352)..(352)
<223> n represents any nucleotide

<220>
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<223> n represents any nucleotide

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<222> (369)..(369)
<223> n represents any nucleotide

<220>
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<222> (371)..(371)
<223> n represents any nucleotide

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<223> n represents any nucleotide

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<223> n represents any nucleotide

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<222> (798)..(798)
<223> n represents any nucleotide

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<223> n represents any nucleotide

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<222> (887)..(888)
<223> n represents any nucleotide

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<223> n represents any nucleotide

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<222> (978)..(978)
<223> n represents any nucleotide

<220>
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<222> (1194)..(1194)
<223> n represents any nucleotide

<220>
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<222> (673)..(673)
<223> n represents any nucleotide

<400> 75
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tacaccggaa ttgccgggaa gactgggtcc ttctttggat aaaccaactc tatgcccggc 120
catttgggcg tgcccccgca agactgctar ccgagtagcg ttgggttgcg aaaggccttg 180
tggtagtgcc tgataggggtg cttgcgagtg ccccgggagg tctcgtagac cgtgcatcat 240
gagcacaaat cctaaacctc aaagaaaaac caaaagaaac actaaccgcc gccacagga 300
cgttaagtgc ccgggcgggtg gccagatcgt tggcggagta tacttggtgc cntgcagggg 360
nccaggtng ngtnatgcg caacgangaa gactnccgaa cagtcccagc cacgtgggag 420
gcgccagccc atcccgaaag atcggngcac cactggcaag tcctggggac gtccaggata 480
tccttgccc ctgtatggga acgagggcct cgggtgggca ggggtggctcc tgtccccccg 540
gggctccgc ccgtcatggg gccccacgga cccccggcat aggtcgcgca acttgggtaa 600

gggtcatcgat accctcacgt ncggttttnc cgacctcatg gggtagattc ccgtcgttgg 660
 cgccccagta ggnngcgctg ccagagctct cgcgcattggc gtgagagtc tggaggacgg 720
 gataaactat gaaacaggga acctccccgg ttgtcttttc tctatctccc tcttgcctct 780
 tctgtcctga attaccngc cagtttctgc tgtggaaatc aaaaacacca gmaacacata 840
 catggtgact aacgactggt caaacagyag catcacctgg cagctttnngn ncgcggtgct 900
 tcacgttctt ggatgcgtcc cctgtgaacg agagggcaac agttccccgt gctggattcc 960
 agtcacgccc racgtakncg tgagccgacc tggtagccta accgaggggt tgcgatcgca 1020
 catcgacacc atcgtagcgt ccgcaacatt ttgttctgcc ctctacatag gggatgtatg 1080
 tggcgcgata atgatatgctg cccaagtggc catcgtctcg ccggagcatc atcactttgt 1140
 ccaggactgt aactgttcca tctaccggg ccacataacg gggcctcgta tgtng 1195

<210> 76
 <211> 318
 <212> PRT
 <213> hepatitis C virus

<220>
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 <222> (38)..(38)
 <223> Xaa represents any amino acid

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 <222> (41)..(41)
 <223> Xaa represents any amino acid

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 <222> (44)..(44)
 <223> Xaa represents any amino acid

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<222> (50)..(50)
<223> Xaa represents any amino acid

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<222> (53)..(53)
<223> Xaa represents any amino acid

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<223> Xaa represents any amino acid

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<222> (128)..(128)
<223> Xaa represents any amino acid

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<223> Xaa represents any amino acid

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<222> (145)..(145)
<223> Xaa represents any amino acid

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<222> (186)..(186)
<223> Xaa represents any amino acid

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<222> (197)..(197)
<223> Xaa represents any amino acid

<220>
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<223> Xaa represents any amino acid

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<221> MISC_FEATURE

<222> (244)..(244)

<223> Xaa represents any amino acid

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<221> MISC_FEATURE

<222> (246)..(246)

<223> Xaa represents any amino acid

<220>

<221> MISC_FEATURE

<222> (318)..(318)

<223> Xaa represents any amino acid

<400> 76

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Xaa Cys Arg Xaa Pro Arg Xaa Xaa Xaa Cys Ala
35 40 45

Thr Xaa Lys Thr Xaa Glu Gln Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Asp Arg Xaa Thr Thr Gly Lys Ser Trp Gly Arg Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
100 105 110

Arg His Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Xaa
115 120 125

Gly Phe Xaa Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Val
130 135 140

Xaa Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
145 150 155 160

Gly Ile Asn Tyr Glu Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Ser Leu Leu Ala Leu Leu Ser Ile Thr Xaa Pro Val Ser Ala Val Glu
180 185 190

Ile Lys Asn Thr Xaa Asn Thr Tyr Met Val Thr Asn Asp Cys Ser Asn
195 200 205

Xaa Ser Ile Thr Trp Gln Leu Xaa Xaa Ala Val Leu His Val Pro Gly
210 215 220

Cys Val Pro Cys Glu Arg Glu Gly Asn Ser Ser Arg Cys Trp Ile Pro
225 230 235 240

Val Thr Pro Xaa Val Xaa Val Ser Arg Pro Gly Ala Leu Thr Glu Gly
245 250 255

Leu Arg Ser His Ile Asp Thr Ile Val Ala Ser Ala Thr Phe Cys Ser
260 265 270

Ala Leu Tyr Ile Gly Asp Val Cys Gly Ala Ile Met Ile Ala Ala Gln
275 280 285

Val Val Ile Val Ser Pro Glu His His His Phe Val Gln Asp Cys Asn
290 295 300



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Ala Gly Ile Val Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Gln Gly Thr Glu Arg Asp Glu Asn Asn Leu Arg
100 105 110

Pro

<210> 79
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 79
ctcaacagtc acggagaggg acatcaggaa tgaggagtcc atattcctgg cctgctcggt 60
gcccgaggag gcccggactg tcatacatte gctcactgag agactctaca taggcggggcc 120
gatgatgaac agcaaaggcc agtcctgtgg atacaggcgt tgtcgcgccca ggggggtggt 180
caccactagc atgggcaata ccatcacgtg ctatgtgaaa gccatggcag cttgcagagc 240
tgccggggatt gacgccccca caatgttggt atgtggcgac gacctggtgg tcatctcaga 300
gagtcagggg accgaggagg acgagcgaaa tctgagagtc 340

<210> 80
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 80

Ser Thr Val Thr Glu Arg Asp Ile Arg Asn Glu Glu Ser Ile Phe Leu
1 5 10 15

Ala Cys Ser Leu Pro Glu Glu Ala Arg Thr Val Ile His Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Ile Gly Gly Pro Met Met Asn Ser Lys Gly Gln Ser
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Met
50 55 60

Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Met Ala Ala Cys Arg Ala
65 70 75 80

Ala Gly Ile Asp Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Gln Gly Thr Glu Glu Asp Glu Arg Asn Leu Arg
100 105 110

Val

<210> 81
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 81
ctcttgactc tactgtcact gaacaggata tcagggtaga agaagaaata taccaatgtt 60
gtgaccttga gccggaggct agacgggcaa tcaaatacgt caccggaacgg ctttacgttg 120
gagggtcccat gttcaacagc aaggggctca aatgcggata tcgccgttgc cgtgctagcg 180
gtgtattgcc cactagctac ggtaatacaa tcacctgcta catcaaggcc agagcggctg 240
ctcgagctgc gggccttcaa gacccatcat tccttgtctg cggagatgat ttggtggtag 300
tggctgagag ttgcgkcggt gatgaggagg atagggcagc 340

<210> 82
<211> 113
<212> PRT
<213> hepatitis C virus

<220>
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<222> (103)..(103)
<223> Xaa represents any amino acid

<400> 82

Ser Thr Val Thr Glu Gln Asp Ile Arg Val Glu Glu Glu Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Arg Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Phe Asn Ser Lys Gly Leu Lys
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr Ser Tyr
50 55 60

Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Arg Ala Ala Ala Arg Ala
65 70 75 80

Ala Gly Leu Gln Asp Pro Ser Phe Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Val Ala Glu Ser Cys Xaa Val Asp Glu Glu Asp Arg Ala Ala Leu
100 105 110

Arg

<210> 83

<211> 340

<212> DNA

<213> hepatitis C virus

<220>

<221> misc_feature

<222> (336)..(336)

<223> n represents any nucleotide

<400> 83

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60

ggagcccgaa gctcgcaagg ttattaccgc cctcacagaa agactctacg tgggcggccc 120
 catgcacaac agcaagggag acctttgtgg gtatcggaga tgccgcgcaa gcggcgtcta 180
 caccaccagc ttcggaaaca cactgacgtg ctacctcaaa gcctcagctg ctattagagc 240
 ggcagggctg agagactgca ccatgctggg ttgcggtgac gacttggtcg tcatcgctga 300
 gagcgatggc gtagaggagg ataaccgagc cctccnagcc 340

<210> 84
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<220>
 <221> MISC_FEATURE
 <222> (112)..(112)
 <223> Xaa represents any amino acid

<220>
 <221> misc_feature
 <223> Xaa represents any amino acid

<400> 84

Ser Thr Val Thr Glu Lys Asp Ile Arg Pro Glu Glu Glu Val Tyr Gln
 1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Val Ile Thr Ala Leu Thr
 20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Lys Gly Asp Leu
 35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
 50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ser Ala Ala Ile Arg Ala
 65 70 75 80

Ala Gly Leu Arg Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Val Ile Ala Glu Ser Asp Gly Val Glu Glu Asp Asn Arg Ala Leu Xaa
 100 105 110

Ala

<210> 85
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 85
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 ggarcccgaa gcccgcaaag caatatccgc cctcacagag agctctact tgggcggccc 120
 catgtataac agcaaagggg agctctgcgg gtatcggagg tgccgcgcga gcggagtgtg 180
 caccacaagt ttcggaaca cagtgcctg ctatcttaag gccaccgcag ctaccagggc 240
 tgcaggccta aaagactgca ccatgctggg ctgcgggtgac gacttggtcg tcatcgccga 300
 gagcgagggc gtagaggagg attcccaacc cctccgagcc 340

<210> 86
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<220>
 <221> MISC_FEATURE
 <222> (21)..(21)
 <223> Xaa represents any amino acid

<220>
 <221> MISC_FEATURE
 <222> (34)..(34)
 <223> Xaa represents any amino acid

<400> 86

Ser Thr Val Thr Glu Lys Asp Ile Arg Val Glu Glu Glu Ile Tyr Gln
 1 5 10 15

Cys Cys Asp Leu Xaa Pro Glu Ala Arg Lys Ala Ile Ser Ala Leu Thr
 20 25 30

Glu Xaa Leu Tyr Leu Gly Gly Pro Met Tyr Asn Ser Lys Gly Glu Leu
 35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
 50 55 60

Gly Asn Thr Val Thr Cys Tyr Leu Lys Ala Thr Ala Ala Thr Arg Ala
 65 70 75 80

Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Val Ile Ala Glu Ser Glu Gly Val Glu Glu Asp Ser Gln Pro Leu Arg
 100 105 110

Ala

<210> 87
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 87
 ctccaccgta accgaaagg acatcagggt cgaggaggag gtctatcagt gttgtgatct 60
 ggagccagag gcccgcaagg caatatccgc cctcacggag agactctatg tgggcggtcc 120
 catgtttaac agcaaggagg acctatgtgg ctaccgcagg tgccgcgcaa gcggcgctcta 180
 caccaccagc ttcggaaca cactgacctg ctacctcaag gccacggccg ctaccagagc 240
 ggccggcctg aaggattgca caatgctggg ttgcggggac gacctggtcg tcatcgcaga 300
 gagcgtatggc gtggacgagg accgocgagc cctccaagct 340

<210> 88
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 88

Ser Thr Val Thr Glu Arg Asp Ile Arg Val Glu Glu Glu Val Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Ala Ile Ser Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Phe Asn Ser Lys Gly Asp Leu
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Thr Ala Ala Thr Arg Ala
65 70 75 80

Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Asp Gly Val Asp Glu Asp Arg Arg Ala Leu Gln
100 105 110

Ala

<210> 89
<211> 340
<212> DNA
<213> hepatitis C virus

<220>
<221> misc_feature
<222> (111)..(111)
<223> n represents any nucleotide

<220>
<221> misc_feature

<222> (126)..(126)
<223> n represents any nucleotide

<400> 89
ctcaacagtc acagagcgcg atgtccagac ggagcatgac atctaccagt gctgtaagtt 60
ggagcccgca gcacggacag ccatcacatc gcttactgac cgattgtact ncggtggtcc 120
catgtntaac tctaaaggtc aggcattgtg ataccgtagg tgcagggcca gtggcgtctt 180
gaccaccatc ctggccaata ctctgacttg ctacttgaaa gctcaggcgg catgcagagc 240
tgccgggctg aaggactttg acatgttggg ctgcggagac gacdtgtcg ttatttcgga 300
gagtttgggg gtctcggagg acactagtgc actgcgagct 340

<210> 90
<211> 113
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (37)..(37)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (42)..(42)
<223> Xaa represents any amino acid

<400> 90
Ser Thr Val Thr Glu Arg Asp Val Gln Thr Glu His Asp Ile Tyr Gln
1 5 10 15
Cys Cys Lys Leu Glu Pro Ala Ala Arg Thr Ala Ile Thr Ser Leu Thr
20 25 30
Asp Arg Leu Tyr Xaa Gly Gly Pro Met Xaa Asn Ser Lys Gly Gln Ala
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ile Leu
50 55 60

Ala Asn Thr Leu Thr Cys Tyr Leu Lys Ala Gln Ala Ala Cys Arg Ala
65 70 75 80

Ala Gly Leu Lys Asp Phe Asp Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Leu Gly Val Ser Glu Asp Thr Ser Ala Leu Arg
100 105 110

Ala

<210> 91
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 91
ctcgacagtc accgagcgcg acatccrcac cgagcacgac atctaccaat gctgccaaact 60
tgacccggtg gcacgcaagg ctattacatc tctgactgag cggctgtact gcggwggggc 120
catgatgaac tcccgtggtc aatcatgtgg ataccgtagg tgccgagcca gtggcgtgct 180
caccacgagc ttgggcaata ccctaacatg ctattttgaaa gcacaagcag cgtgtagggc 240
agcaaagctc aaaaactatg acatgttagt ctgcggagac gatctagtcg ttatcgcgga 300
gagtggagga gtctctgagg atgttgacgc cctgcgagca 340

<210> 92
<211> 113
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (38)..(38)
<223> Xaa represents any amino acid

<400> 92

Ser Thr Val Thr Glu Arg Asp Ile Xaa Thr Glu His Asp Ile Tyr Gln
1 5 10 15

Cys Cys Gln Leu Asp Pro Val Ala Arg Lys Ala Ile Thr Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Cys Xaa Gly Pro Met Met Asn Ser Arg Gly Gln Ser
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Leu
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Gln Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Lys Asn Tyr Asp Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Gly Gly Val Ser Glu Asp Val Asp Ala Leu Arg
100 105 110

Ala

<210> 93
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 93
ctcctccgtc acggagcgtg acatccgcac tgaacacgac atctatcagt gctgcccaatt 60

agatccggta gcacggaaaag ccattacatc tcttactgag cggtgtact gcggcggccc 120
 catgtacaac tctcgaggtc agtcatgtgg gtaccgcagg tgccgggcta gtggtgtctt 180
 caccacaagc ttgggcaaca ccatgacatg ctacctgaag gctcaggcgg cttgtagggc 240
 agcraagctc aaaaactttg acatgttggc ctgcggagac gacctagtcg ttattgctga 300
 gagcggagga gtccctgagg atgccggggc cctgcgagtc 340

<210> 94
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<220>
 <221> MISC FEATURE
 <222> (81)..(81)
 <223> Xaa represents any amino acid

<400> 94

Ser Ser Val Thr Glu Arg Asp Ile Arg Thr Glu His Asp Ile Tyr Gln
 1 5 10 15

Cys Cys Gln Leu Asp Pro Val Ala Arg Lys Ala Ile Thr Ser Leu Thr
 20 25 30

Glu Arg Leu Tyr Cys Gly Gly Pro Met Tyr Asn Ser Arg Gly Gln Ser
 35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Leu
 50 55 60

Gly Asn Thr Met Thr Cys Tyr Leu Lys Ala Gln Ala Ala Cys Arg Ala
 65 70 75 80

Xaa Lys Leu Lys Asn Phe Asp Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Val Ile Ala Glu Ser Gly Gly Val Pro Glu Asp Ala Gly Ala Leu Arg
 100 105 110

Val

<210> 95
<211> 340
<212> DNA
<213> hepatitis C virus

<220>
<221> misc_feature
<222> (36)..(36)
<223> n represents any nucleotide

<400> 95
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cgaccagag gcccggaag ccataaagtc tctcactgag aggccttatg tcggggggccc 120
tatgtacaac tcaaagggcc aactctgtgg tcaacgccga tgccgagcaa gcggagtact 180
ccccacaagc atgggtaaca ccatacagtc ctccctgaag gcaaccgccg cttgccgagc 240
agccggcttt acagattatg acatgttggt ctgcggagac gatttggttg tcgtaactga 300
gagtgtctga gtcaacgagg atatcgctaa cctgcgagcc 340

<210> 96
<211> 113
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (12)..(12)
<223> Xaa represents any amino acid

<400> 96

Ser Thr Val Thr Gly Arg Asp Ile Arg Thr Glu Xaa Asp Ile Tyr Leu
1 5 10 15

Ser Cys Gln Leu Asp Pro Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr

20

25

30

Glu Arg Leu Tyr Val Gly Gly Pro Met Tyr Asn Ser Lys Gly Gln Leu
 35 40 45

Cys Gly Gln Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr Ser Met
 50 55 60

Gly Asn Thr Ile Thr Cys Phe Leu Lys Ala Thr Ala Ala Cys Arg Ala
 65 70 75 80

Ala Gly Phe Thr Asp Tyr Asp Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Val Val Thr Glu Ser Ala Gly Val Asn Glu Asp Ile Ala Asn Leu Arg
 100 105 110

Ala

<210> 97
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 97
 ctccactgtc actgagcagg acatcagggt agaactttcc atctttcagg cctgtgacct 60
 caaggacgag gctaggaggg tgataacttc actcacggag cggttttact gtggtgggtcc 120
 tatgttcaac agcaagggac aacactgcgg ttaccgccgc tgccgtgcta gtgggggtgct 180
 acccaccagc ttcgggaaca caatcacctg ttacatcaaa gcaaaggcag ctaccaaagc 240
 tgcgggaatt aaaaatccat cattccttgt ctgcggagat gacttggtcg tgattgctga 300
 gagtgcaggg atcgatgagg acaagagcgc cttgagagct 340

<210> 98
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<400> 98

Ser Thr Val Thr Glu Gln Asp Ile Arg Val Glu Leu Ser Ile Phe Gln
1 5 10 15

Ala Cys Asp Leu Lys Asp Glu Ala Arg Arg Val Ile Thr Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly Gln His
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr Ser Phe
50 55 60

Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Lys Ala Ala Thr Lys Ala
65 70 75 80

Ala Gly Ile Lys Asn Pro Ser Phe Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Ala Gly Ile Asp Glu Asp Lys Ser Ala Leu Arg
100 105 110

Ala

<210> 99

<211> 340

<212> DNA

<213> hepatitis C virus

<400> 99

ctctaccgtc acagagaggg acatacggac agaagaatcc atctatctgt cttgtcaatt 60
gcctgaagag gcccggaag ccattaaatc gctgacagag agactatacg tgggcggccc 120
gatggaaaac agcaagggcc aggccttgccg atataggcgt tgccgcgcaa gcggggtatt 180
caccacaagc ttggggaaca ccatgacttg ttacatcaaa gctaaagcgg cttgtaaagc 240
cgctggcatt gtagaccgg tgatgctcgt gtgcggtgac gacctagtgg tcatctcaga 300
aagcaagggg gtggaggagg accagcggga cctacgagtc 340

<210> 100
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 100

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Leu
1 5 10 15

Ser Cys Gln Leu Pro Glu Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Glu Asn Ser Lys Gly Gln Ala
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Leu
50 55 60

Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Lys Ala Ala Cys Lys Ala
65 70 75 80

Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Lys Gly Val Glu Glu Asp Gln Arg Asp Leu Arg
100 105 110

Val

<210> 101
<211> 335
<212> DNA
<213> hepatitis C virus

<400> 101
ctccactgtc actgagagag acatacggac agaagaatcc atctayytgg cttgtcaatt 60


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gccggaagag gcccggaagg ccattaaatc actgacagag agactatacg tgggcggccc      120
gatggaaaac agcaaaggcc aggccctgcgg atataggcgt tgccgcgcaa gcgggggtatt    180
caccacaagc ttgggggaaca ccatgacttg ttacatcaag gccaaargcag cttgtaaagc    240
ygctggcatt gttgacccgg tgatgctcgt gtgcggcgac gacctagtgg tcatctcaga    300
gagcaagggg gtagaggagg accagcgaga cctac                                335

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<210> 102
<211> 113
<212> PRT
<213> hepatitis C virus

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<220>
<221> MISC_FEATURE
<222> (15)..(16)
<223> Xaa represents any amino acid

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<220>
<221> MISC_FEATURE
<222> (75)..(75)
<223> Xaa represents any amino acid

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<220>
<221> MISC_FEATURE
<222> (80)..(80)
<223> Xaa represents any amino acid

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<220>
<221> MISC_FEATURE
<222> (112)..(113)
<223> Xaa represents any amino acid

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<400> 102

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Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Xaa Xaa
1           5           10          15

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Ala Cys Gln Leu Pro Glu Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20          25          30

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Glu Arg Leu Tyr Val Gly Gly Pro Met Glu Asn Ser Lys Gly Gln Ala
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Leu
50 55 60

Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Xaa Ala Ala Cys Lys Xaa
65 70 75 80

Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Lys Gly Val Glu Glu Asp Gln Arg Asp Leu Xaa
100 105 110

Xaa

<210> 103
<211> 461
<212> DNA
<213> hepatitis C virus

<400> 103
cgtacagcct ccaggacccc ccctcccggg agagccatag tggctctgcgg aaccgggtgag 60
tacaccggaa ttgccgggaa gactgggtcc tttcttgat taaccactc tatgcoogga 120
gatttgggcg tgcccccgca agactgctag ccgagtagcg ttgggttgcg aaaggccttg 180
tggtactgcc tgataggggtg cttgcgagtg ccccgaggag tctcgtagac cgtgcaccat 240
gagcacgaat cctaaacctc aaagacaaac caaaagaaac accaaccgcc gccacagga 300
cgttaagttc ccgggcgggtg gccagatcgt tggcgggggtg tacttggtgc cgcgcagggg 360
cccagagtg ggtgtgcgcg cgacgagaaa gacctcggag cgggtcccagc cgcgtgggag 420
gcgccaacct atccccaaagg ttaggcgcac caccggccgt t 461

<210> 104
<211> 74
<212> PRT

<213> hepatitis C virus

<400> 104

Met Ser Thr Asn Pro Lys Pro Gln Arg Gln Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Val Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Val Arg Arg Thr Thr Gly Arg
65 70

<210> 105

<211> 340

<212> DNA

<213> hepatitis C virus

<220>

<221> misc_feature

<222> (338)..(338)

<223> n represents any nucleotide

<400> 105

ctctactgtc acagagaggg atatacgaac agaggaatcc atytatctgg cttgtcaatt 60

gcccgaagag gcccggaagg ccatcaaata actgacagag agactatacg tgggcggccc 120

gatggaaaac agcaagggcc aggcctgcgg atacaggcgt tgccgcgcaa gcgggggtatt 180

caccacaagc ttggggaaca ccatgacttg ttacatcaaa gccaaaggcg cttgttaaagc 240

cgctggcatt gttgaccag tgatgctcgt gtgcggcgac gacctagtgg tcatctcaga 300

aagcaagggg gtggaggagg accaacgaga cctacgantic 340

<210> 106
<211> 113
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (14)..(14)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (113)..(113)
<223> Xaa represents any amino acid

<400> 106

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Xaa Tyr Leu
1 5 10 15

Ala Cys Gln Leu Pro Glu Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Glu Asn Ser Lys Gly Gln Ala
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Leu
50 55 60

Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Lys Ala Ala Cys Lys Ala
65 70 75 80

Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Lys Gly Val Glu Glu Asp Gln Arg Asp Leu Arg
100 105 110

Xaa

<210> 107
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 107

Ala Arg Gln Ser Asp Gly Arg Ser Trp Ala Gln
1 5 10

<210> 108
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 108

Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln
1 5 10

<210> 109
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 109

Glu Arg Arg Pro Glu Gly Arg Ser Trp Ala Gln
1 5 10

<210> 110
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 110

Ala Arg Arg Pro Glu Gly Arg Ser Trp Ala Gln
1 5 10

<210> 111
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 111

Asp Arg Arg Thr Thr Gly Lys Ser Trp Gly Arg
1 5 10

<210> 112
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 112

Asp Arg Arg Ala Thr Gly Arg Ser Trp Gly Arg
1 5 10

<210> 113
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 113

Asp Arg Arg Ala Thr Gly Lys Ser Trp Gly Arg
1 5 10

<210> 114
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 114

Val Arg Gln Pro Thr Gly Arg Ser Trp Gly Gln
1 5 10

<210> 115

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 115

Val Arg His Gln Thr Gly Arg Thr Trp Ala Gln
1 5 10

<210> 116

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 116

Val Arg Gln Asn Gln Gly Arg Thr Trp Ala Gln
1 5 10

<210> 117

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 117

Ala Arg Arg Thr Glu Gly Arg Ser Trp Ala Gln
1 5 10

<210> 118

<211> 11

<212> PRT

<213> hepatitis C virus

<220>

<221> MISC_FEATURE

<222> (8)..(11)

<223> Xaa represents any amino acid

<400> 118

Val Arg Arg Thr Thr Gly Arg Xaa Xaa Xaa Xaa
1 5 10

<210> 119

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 119

Val Arg Arg Thr Thr Gly Arg Thr Trp Ala Gln
1 5 10

<210> 120

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 120

His Glu Val Arg Asn Ala Ser Gly Val Tyr His Val
1 5 10

<210> 121

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 121

His Glu Val Arg Asn Ala Ser Gly Val Tyr His Leu
1 5 10

<210> 122

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 122

Tyr Glu Val His Ser Thr Thr Asp Gly Tyr His Val
1 5 10

<210> 123

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 123

Val Glu Val Lys Asn Thr Ser Gln Ala Tyr Met Ala
1 5 10

<210> 124

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 124

Ile Gln Val Lys Asn Asn Ser His Phe Tyr Met Ala
1 5 10

<210> 125

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 125

Val Gln Val Lys Asn Thr Ser Thr Met Tyr Met Ala
1 5 10

<210> 126

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 126

Val Gln Val Lys Asn Thr Ser His Ser Tyr Met Val
1 5 10

<210> 127

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 127

Val Gln Val Ala Asn Arg Ser Gly Ser Tyr Met Val
1 5 10

<210> 128

<211> 12

<212> PRT

<213> hepatitis C virus

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> Xaa represents any amino acid

<400> 128

Val Glu Ile Lys Asn Thr Xaa Asn Thr Tyr Val Leu
1 5 10

<210> 129
<211> 12
<212> PRT
<213> hepatitis C virus

<400> 129

Val Glu Ile Lys Asn Thr Ser Asn Thr Tyr Val Leu
1 5 10

<210> 130
<211> 12
<212> PRT
<213> hepatitis C virus

<400> 130

Ile Asn Tyr Arg Asn Val Ser Gly Ile Tyr Tyr Val
1 5 10

<210> 131
<211> 12
<212> PRT
<213> hepatitis C virus

<400> 131

Ile Asn Tyr Arg Asn Thr Ser Gly Ile Tyr His Val
1 5 10

<210> 132
<211> 12
<212> PRT
<213> hepatitis C virus

<400> 132

Ile Asn Tyr His Asn Thr Ser Gly Ile Tyr His Ile
1 5 10

<210> 133

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 133

Thr Asn Tyr Arg Asn Val Ser Gly Ile Tyr His Val
1 5 10

<210> 134

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 134

Gln His Tyr Arg Asn Val Ser Gly Ile Tyr His Val
1 5 10

<210> 135

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 135

Ile Gln Val Lys Asn Ala Ser Gly Ile Tyr His Leu
1 5 10

<210> 136

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 136

Ala His Tyr Thr Asn Lys Ser Gly Leu Tyr His Leu
1 5 10

<210> 137

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 137

Leu Asn Tyr Ala Asn Lys Ser Gly Leu Tyr His Leu
1 5 10

<210> 138

<211> 12

<212> PRT

<213> hepatitis C virus

<400> 138

Leu Glu Tyr Arg Asn Ala Ser Gly Leu Tyr Met Val
1 5 10

<210> 139

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 139

Ile Tyr Glu Met Asp Gly Met Ile Met His Tyr
1 5 10

<210> 140
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 140

Ile Tyr Glu Met Ser Gly Met Ile Leu His Ala
1 5 10

<210> 141
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 141

Val Tyr Glu Ala Lys Asp Ile Ile Leu His Thr
1 5 10

<210> 142
<211> 11
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa represents any amino acid

<400> 142

Val Trp Gln Leu Xaa Asp Ala Val Leu His Val
1 5 10

<210> 143
<211> 11
<212> PRT

<213> hepatitis C virus

<400> 143

Val Trp Gln Leu Arg Asp Ala Val Leu His Val
1 5 10

<210> 144

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 144

Ile Trp Gln Met Gln Gly Ala Val Leu His Val
1 5 10

<210> 145

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 145

Val Trp Gln Leu Lys Asp Ala Val Leu His Val
1 5 10

<210> 146

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 146

Val Trp Gln Leu Glu Glu Ala Val Leu His Val
1 5 10

<210> 147
<211> 11
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (5)..(6)
<223> Xaa represents any amino acid

<400> 147

Thr Trp Gln Leu Xaa Xaa Ala Val Leu His Val
1 5 10

<210> 148
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 148

Val Tyr Glu Ala Asp His His Ile Leu His Leu
1 5 10

<210> 149
<211> 11
<212> PRT
<213> hepatitis C virus

<400> 149

Val Tyr Glu Ala Asp His His Ile Leu Ala Leu
1 5 10

<210> 150
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<213> hepatitis C virus

<400> 150

Val Phe Glu Ala Asp His His Ile Leu His Leu
1 5 10

<210> 151

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 151

Val Tyr Glu Ser Asp His His Ile Leu His Leu
1 5 10

<210> 152

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 152

Val Phe Glu Glu Thr Met Ile Leu His Leu
1 5 10

<210> 153

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 153

Val Tyr Glu Ala Glu Thr Leu Ile Leu His Leu
1 5 10

<210> 154

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 154

Val	Tyr	Glu	Ala	Asn	Gly	Met	Ile	Leu	His	Leu
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<210> 155

<211> 11

<212> PRT

<213> hepatitis C virus

<400> 155

Val	Tyr	Glu	Ala	Gly	Asp	Ile	Ile	Leu	His	Leu
1				5					10	

<210> 156

<211> 13

<212> PRT

<213> hepatitis C virus

<400> 156

Val	Arg	Glu	Asp	Asn	His	Leu	Arg	Cys	Trp	Met	Ala	Leu
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<210> 157

<211> 13

<212> PRT

<213> hepatitis C virus

<400> 157

Val	Arg	Glu	Asn	Asn	Ser	Ser	Arg	Cys	Trp	Met	Ala	Leu
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<210> 158
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<212> PRT
<213> hepatitis C virus

<400> 158

Ile Arg Glu Gly Asn Ile Ser Arg Cys Trp Val Leu Pro
1 5 10

<210> 159
<211> 13
<212> PRT
<213> hepatitis C virus

<400> 159

Glu Asn Ser Ser Gly Arg Phe His Cys Trp Ile Pro Ile
1 5 10

<210> 160
<211> 13
<212> PRT
<213> hepatitis C virus

<400> 160

Glu Arg Ser Gly Asn Arg Thr Phe Cys Trp Thr Ala Val
1 5 10

<210> 161
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<212> PRT
<213> hepatitis C virus

<400> 161

Glu Leu Gln Gly Asn Lys Ser Arg Cys Trp Ile Pro Val
1 5 10

<210> 162
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<213> hepatitis C virus

<400> 162

Glu Arg His Gln Asn Gln Ser Arg Cys Trp Ile Pro Val
1 5 10

<210> 163
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<212> PRT
<213> hepatitis C virus

<400> 163

Glu Trp Lys Asp Asn Thr Ser Arg Cys Trp Ile Pro Val
1 5 10

<210> 164
<211> 13
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<213> hepatitis C virus

<400> 164

Glu Arg Glu Gly Asn Ser Ser Arg Cys Trp Ile Pro Val
1 5 10

<210> 165
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<212> PRT
<213> hepatitis C virus

<400> 165

Val Arg Glu Gly Asn Gln Ser Arg Cys Trp Val Ala Leu
1 5 10

<210> 166

<211> 13

<212> PRT

<213> hepatitis C virus

<400> 166

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1 5 10

<210> 167

<211> 13

<212> PRT

<213> hepatitis C virus

<400> 167

Val Arg Val Gly Asn Gln Ser Ser Cys Trp Val Ala Leu
1 5 10

<210> 168

<211> 13

<212> PRT

<213> hepatitis C virus

<400> 168

Val Arg Val Gly Asn Gln Ser Arg Cys Trp Val Ala Leu
1 5 10

<210> 169

<211> 13

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<213> hepatitis C virus

<400> 169

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<210> 170

<211> 13

<212> PRT

<213> hepatitis C virus

<400> 170

Val Lys Thr Gly Asn Thr Ser Arg Cys Trp Val Ala Leu
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<210> 171

<211> 13

<212> PRT

<213> hepatitis C virus

<400> 171

Ile Lys Ala Gly Asn Glu Ser Arg Cys Trp Leu Pro Val
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<210> 172

<211> 13

<212> PRT

<213> hepatitis C virus

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<213> hepatitis C virus

<400> 173

Val Lys Thr Gly Asn Leu Thr Lys Cys Trp Leu Ser Ala
1 5 10

<210> 174
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<213> hepatitis C virus

<400> 174

Val Arg Ser Gly Asn Thr Ser Arg Cys Trp Ile Pro Val
1 5 10

<210> 175
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<213> hepatitis C virus

<400> 175

Val Lys Asn Ala Ser Val Pro Thr Ala Ala
1 5 10

<210> 176
<211> 10
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<400> 176

Val Lys Asp Ala Asn Val Pro Thr Ala Ala
1 5 10

<210> 177

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 177

Ala Arg Ile Ala Asn Ala Pro Ile Asp Glu
1 5 10

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<212> PRT

<213> hepatitis C virus

<400> 178

Val Ser Lys Pro Gly Ala Leu Thr Lys Gly
1 5 10

<210> 179

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 179

Val Ser Arg Pro Gly Ala Leu Thr Arg Gly
1 5 10

<210> 180

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 180

Val	Asn	Gln	Pro	Gly	Ala	Leu	Thr	Arg	Gly
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<211> 10

<212> PRT

<213> hepatitis C virus

<400> 181

Val	Ser	Gln	Pro	Gly	Ala	Leu	Thr	Arg	Gly
1				5					10

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<211> 10

<212> PRT

<213> hepatitis C virus

<400> 182

Val	Ser	Gln	Pro	Gly	Ala	Leu	Thr	Lys	Gly
1				5					10

<210> 183

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 183

Val	Ser	Arg	Pro	Gly	Ala	Leu	Thr	Glu	Gly
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<213> hepatitis C virus

<400> 184

Ala Pro Tyr Ile Gly Ala Pro Leu Glu Ser
1 5 10

<210> 185
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<213> hepatitis C virus

<400> 185

Ala Pro Tyr Thr Ala Ala Pro Leu Glu Ser
1 5 10

<210> 186
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<212> PRT
<213> hepatitis C virus

<400> 186

Ala Pro Ile Leu Ser Ala Pro Leu Met Ser
1 5 10

<210> 187
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<213> hepatitis C virus

<400> 187

Val Pro Asn Ser Ser Val Pro Ile His Gly
1 5 10

<210> 188
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<400> 188

Val Pro Asn Ala Ser Thr Pro Val Thr Gly
1 5 10

<210> 189
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<400> 189

Val Gln Asn Ala Ser Val Ser Ile Arg Gly
1 5 10

<210> 190
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<213> hepatitis C virus

<400> 190

Val Lys Ser Pro Cys Ala Ala Thr Ala Ser
1 5 10

<210> 191
<211> 10
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<213> hepatitis C virus

<400> 191

Ser Pro Arg Met His His Thr Thr Gln Glu
1 5 10

<210> 192
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<213> hepatitis C virus

<400> 192

Ser Pro Arg Leu Tyr His Thr Thr Gln Glu
1 5 10

<210> 193
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<400> 193

Thr Ser Arg Arg His Trp Thr Val Gln Asp
1 5 10

<210> 194
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<212> PRT
<213> hepatitis C virus

<400> 194

Ala Pro Lys Arg His Tyr Phe Val Gln Glu
1 5 10

<210> 195
<211> 10
<212> PRT
<213> hepatitis C virus

<400> 195

Ser	Pro	Gln	Tyr	His	Thr	Phe	Val	Gln	Glu
1				5					10

<210> 196

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 196

Ser	Pro	Gln	His	His	Asn	Phe	Ser	Gln	Asp
1				5					10

<210> 197

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 197

Ser	Pro	Gln	His	His	Ile	Phe	Val	Gln	Asp
1				5					10

<210> 198

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 198

Ser	Pro	Glu	His	His	His	Phe	Val	Gln	Asp
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<210> 199

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 199

Arg	Pro	Arg	Arg	His	Trp	Thr	Thr	Gln	Asp
1				5					10

<210> 200

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 200

Arg	Pro	Arg	Arg	His	Trp	Thr	Ala	Gln	Asp
1				5					10

<210> 201

<211> 10

<212> PRT

<213> hepatitis C virus

<400> 201

Gln	Pro	Arg	Arg	His	Trp	Thr	Thr	Gln	Asp
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<211> 10

<212> PRT

<213> hepatitis C virus

<400> 202

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1				5					10

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<213> hepatitis C virus

<400> 203

Gln Pro Arg Arg His Trp Thr Val Gln Asp
1 5 10

<210> 204
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<213> hepatitis C virus

<400> 204

Arg Pro Lys Tyr His Gln Val Thr Gln Asp
1 5 10

<210> 205
<211> 10
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<213> hepatitis C virus

<400> 205

Arg Pro Arg Met His Gln Val Val Gln Glu
1 5 10

<210> 206
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<400> 206

Arg Pro Arg Met Tyr Glu Ile Ala Gln Asp
1 5 10

<210> 207
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<400> 207

Arg His Arg Gln His Trp Thr Val Gln Asp
 1 5 10

<210> 208
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 208

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ggccctagat tgggtgtgcg cgcgacgaga aagacttccg agcggtcgca acctcgaggt	180
agacgtcagc ctatcccca ggctcgtcgg cccgagggca ggacctgggc tcagcccggg	240
tacccttggc ccctctatgg caatgagggc tgcgggtggg cgggatggct cctgtctccc	300
cgtggctctc ggctagctg gggccccaca gacccccggc gtaggtcgcg caatttgggt	360
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ggcgtgaact atgcaacagg gaaccttctt ggttctcttt tctctatctt ccttctggcc	540
ctgctctctt gcttgactgt gcccgttcg gcctaccaag tgcgcaactc cacggggctt	600
taccacgtca ccaatgattg ccctaactcg agtattgtgt acgagggcgc cgatgccatc	660
ctgcacactc cggggtgcgt cccttgcgtt cgtgagggca acgcctcgag gtgttgggtg	720
gcgatgacct ctacggtggc caccagggat ggcaaaactcc ccgcgacgca gcttcgacgt	780
cacatcgatc tgcttgtcgg gacgcccacc ctctgttcgg ccctctacgt gggggacctc	840
tgcgggtctg tctttcttgt cggccaaactg ttcaccttct ccccaggcg ccaactggacg	900

acgcaagggtt gcaattgctc tatctatccc ggccatataa cgggtcaccg catggca 957

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<211> 957
<212> DNA
<213> hepatitis C virus

<400> 209
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ggccccaggt tgggtgtgcg cgcgactagg aagacttccg agcggtcgca acctcgtgga 180
aggcgacaac ctatcccaaa ggctcgccgg cccgagggta ggacctgggc tcagcccggg 240
taccttggtc cctctatgg caacgagggt atggggtggg caggatggct cctgtcacc 300
cgtggtcttc ggctagtgtg gggccccaca gacccccggc gtaggtcgcg taatttgggt 360
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ggcgcccccc taggggggcg tgcaggggcc ctggcacatg gtgtccgggt tctggaggac 480
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gcgctcactc ccacgctcgc ggccaggaac agcagcatcc ccaccacgac aatacgacgc 780
cacgtcgatt tgctcgttgg ggcggtgtct ctctgttccg ctatgtaagt tggggatctc 840
tgcggatccg tttttctcgt ctcccagctg ttcaccttct cacctcgccg gtatgagacg 900
gtacaagatt gcaattgctc aatctatccc ggccacgtat cagggtcaccg catggct 957

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<211> 957
<212> DNA
<213> hepatitis C virus

<400> 210
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ggccccagag tgggtgtgcg cgcgacgagg aagacttccg agcggtcgca acctcgcggg	180
aggcgtcagc ctattcccaa ggcccgccga cccgagggaa ggtcctgggc gcagccccgg	240
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aaggtcacgc ataccctcac gtgtggcttc gccgacctca tggggtacat cccgctcgtc	420
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ggcgtgaatt acgcaacagg gaacctccc ggttgccttt tttctatctt cttgctcgct	540
cttctatcct gctgacagt cctgcttcg gccgtcggag tgcgcaactc ttcggggggtg	600
taccatgtca ccaatgattg cccaatgcg tccgttgtgt acgagacgga gaacctgac	660
atgcacatgc cgggtgtgt gccctacgta cgcgagggca acgctcgag gtgttgggtc	720
tcccttagtc ccaccgtagc cggcagggat tcgcgcgtcc ccgtcagtga ggttcggcgt	780
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<210> 211
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 211	
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ggccccaggt tgggtgtgcg cgcgacaagg aagacttcgg agcggtcoca gccacgtgga	180
aggcgcacgc ccacccctaa ggatcggcgc tccactggca aatcctgggg aaaaccagga	240
tacccttggc ccctatacgg gaatgaggga ctcggtcggg caggatggct cctgtcccc	300
cgaggttccc gtccctcttg gggccccaat gacccccggc ataggctccg caacgtgggt	360
aaggtcacgc ataccctaac gtgcggcttt gccgacctca tggggtacat cctgtcgta	420
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ctgctgtcct gcatcaccac cccggtctcc gctgccgaag tgaagaacat cagtaccggc	600
tacatgggtga ccaacgactg caccaatgat agcattacct ggcaactcca ggctgctgtc	660
ctccacgtcc ccgggtgcgt cccgtgcgag aaagtgggga atacatctcg gtgctggata	720
ccggtctcac cgaatgtggc cgtgcagcag cccggcgccc tcacgcaggg cttacggacg	780
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 <212> DNA
 <213> hepatitis C virus

<400> 212	
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ggccccaggt tgggtgtgcg cgcgacaagg aagacttctg agcgatccca gccgcgtgga	180
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tatccttggc cctgtacgg aaacgagggg tgcggctggg cgggttggct cctgtcccc	300
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ctccatcttc ctggatgcgt cccatgtgag aatgataatg gcaccttgca ttgctggata	720
caagtaacac ccaacgtggc tgtgaaacac cgcgggtgcg tcaactcgtag cctgcgaaca	780
caogtcgaca tgatcgtaat ggcagctacg gcctgtctgg ccttgtatgt gggagatgtg	840
tgcggggcgg tgatgattct atcgcaggct ttcattggtat caccacaacg ccacaacttc	900

acccaagagt gcaactgttc catctaccaa ggtcacatca cgggccatcg catggca 957

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<212> DNA
<213> hepatitis C virus

<400> 213
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<211> 957
<212> DNA
<213> hepatitis C virus

<400> 214

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ggcccccggt tgggtgtgcg cgcgacgagg aaaacttcg agcgggccca gccacgtggg	180
aggcgccagc ccatcccaa agatcggcgc cccactggca agtcctgggg aaaaccagga	240
tacccttggc cctgtacgg gaatgagggc ctcggtggg cagggtggt cctgtcccc	300
cgaggggtct gcccgtcagt gggcccaact gacccccggc acaggtcacg caacttgggt	360
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tacatggtaa ccaatgactg ccagaacagt agcatcgtct gccagctcag ggatgctgtt	660
cttcacgtcc ccgggtgtgt ccttgtgag gagaagggca acatatcccg ctgttgata	720
ccggtttcgc ccaatatagc tgtgagccaa cctggtcgc ttaccaaggg cctgcggacg	780
catattgata ccatcattgc atccgctacg ttttgcctg cctgtacat aggagacctg	840
tgtggcgcgg tgatgttggc ttctcaagtc ttcacatct cggcccagca tcataagttt	900
gtccaggact gcaactgtc catataccca ggccacatca ctggacatcg gatggcg	957

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 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 215	
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ggcccacgat tgggtgtgcg cgcgacgcgt aaaactttctg aacggtcaca gcctcgcgga	180
cgacgacagc ctatcccaa ggcgcgtcgg agcgaaggcc ggtcctgggc tcagcccggg	240
tacccttggc cctctatgg taacgagggc tgcgggtggg cagggtggt cctgtccca	300
cggggctccc gtccatcctg gggcccaaat gacccccggc ggaggctccg caatttgggt	360
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ccagtgcacac ctacagtggc agtcaggtag gtccggagcaa ctactgcttc gatacgcagt	780
catgtggacc tattagtagg cgcggccacg atgtgctctg cgctctacgt gggtgatatg	840
tgtggggctg tctttctcgt gggacaagcc ttcacgttca gacctcgacg ccatcaaacg	900
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<210> 216
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 216	
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aacgttaagt tcccgggcgg cggacagatc gttggtggag tatatgtgct gccgcgtagg	120
ggcccacgat tgggtgtgcy cgcagtagct aagaattccg agcggtcgca gcctcgcaaa	180
cagcgtcacc ttatcccaa ggctcgctcg cgcgagggcc ggtcctgggc tcagcccggg	240
tacccttggc ccctctacgg gaataagggc tgtgggttgg caggatggct cttgtccccc	300
cgtggttctc gccctagtgt gggcccaaat gacccccggc gtagatcccg caactttggt	360
aaggatcatg ataccctaac gtgtggattc gccgacctca tggggtacat tccgctcgtc	420
ggcgccctcg tggggggcgt cgcaagagcc ctcgctcatg gtgtgagggc acttggggac	480
ggagtgaact atgcaacagg gaatcttctt gggtgctcct tttctatctt cctcctcgct	540
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tatgtgctta ccaacgactg ctctaattgg agcattgtgt acgaggccga agatgtgac	660
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acgggtctcaa cgacgggtggc cgttaggacc cttggcggtga ccaccgctc gatccgaacc	780
catgtggata tgctggtagg cgcacgacaa ctgtgttcgg cgctgtacgt cggggacgct	840

ttcggggctg tgtttcttgt gggacaagcg ttcaccttca gacctcgccg ccacacgacc	900
gtgcagacgt gcaactgctc gatataccca ggccatgttt caggacatcg tatggcg	957

<210> 217
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 217	
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ggccctctat tgggtgtgcg cgctacacgt aagacttccg agcggtcaca gcctcgcgcg	180
cggcggcagc ctatcccca ggcgcgctgt ggcgagggac ggtcctgggc tgagcccg	240
tacccttggc cctctacgg taatgagggc tgcgggtggg cgggatggct cctgtccccc	300
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gggattaact tcgcaacagg gaatttacct gggttgcctt tttctatctt cttgcttget	540
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tgcggggcag ttttctctgt aggacaagca ttcacattca gaccccgacg ccaccagaca	900
gttcagcatt gcaactgctc actgtaccca ggcatgttt caggtcacat gatggct	957

<210> 218
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 218

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ggcccaagat tgggtgtgcg cgcaagtctgt aaaacttccg agcggtcaga accccgcaac    180
cggcggcagc ctatcccca ggcaagtcgg agcgagggcc ggtcctgggc tcagcctggg    240
tacccttggc ctcttttatgg caatgagggc tgtgggtggg caggatggct cttgtccccc    300
cgcggtctct ggccatcttg gggccccaat gacccccggc gaaggctctg caacctgggt    360
aaagtcatcg ataccctaac gtgcggattc gccgatctca tggggtacat tccgctcgtc    420
ggcgtccttg tagggggcgt cgcaagagct ctgcacatg gtgtgagagc ccttgaggac    480
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ttgctctctt gcttgggtctg tctgtctgca gggattgaat accggaatgt gtctggcctc    600
tacgtgtctc ccaacgactg ctctaacggc agtatcgtgt atgaggcccc tgaagtcac    660
ttgcacttgc caggtttgtg gccctgcgtt caatcaggca actcctcgca atgctggatt    720
ccggtggcac caacagtggc ggttaagtac gctggcgcgga ccaactgcac gatccgcagt    780
catgtggatc tgcgtgggtgg agctgctacg ttgtgctccg cgctgtatgt tggcgatatg    840
tgtggagccg tcttcttggg gggacagget ttcaccttca gacctcgtca gcacaacacg    900
gtgcagacct gcaattgctc actgtaccct ggtcacatat caggacacag gatggct      957
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<210> 219

<211> 957

<212> DNA

<213> hepatitis C virus

<400> 219

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ggcccaagat tgggtgtgcg cgcaactcgt aagaacttcag agcggtcaca accccgcgga    180
cggcgacagc ctattcccaa ggcaagcccc agcggaggac ggtcctgggc gcagcctggg    240
tacccttggc ccctctatgg taacgagggc tgcgggtggg cagggtggct tctgtctcct    300
cgcggtctcc gaccgagttg gggccccaac gacccccggc gaaggctccg caatttgggt    360
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aaggtcatcg acactctcac atgcggggttc gccgatctca tggggatatat tccgctcgtc	420
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ggaataaatt ttgcaacagg gaaccttccc gggttgcctt tttctatctt ctgtcttgc	540
ctgctgtcat gcttgccttg cctgcagtc gggttggagg ttgcacacgc atccggtctc	600
tacatgctca ccaatgactg ctcaaacagc agcatagtat atgaggcgga agatgtgatc	660
ctgcacatgc ctgggttgcgt tccctgcgtg cagaacggca acacatcgga gtgctggacc	720
ccggcgacac caacggtggc agtcagatac gctggtgcaa cgacggcttc cgtacggga	780
cacgtggatt tgctagtcgg cagtgcact ctgtgctccg cgctctatgt cggtgacctt	840
tgcggggccg tcttcttgt ggggcaggcc ttacattca ggctcgtcg tcatacgact	900
gtccagacct gcaactgctc gttgtaccca ggccatatca caggacatcg catggca	957

<210> 220
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 220	
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gacgtcaagt tcccgggcgg tgggcagatc gttgggtggag tatacgtatt gccgcgcagg	120
ggcccacgat tgggtgtgcg cgcagtgcgt aaatcttccg agcggtcgca acctcgcgga	180
cggcggcagc ctatcccaa ggcaacccga agcaggggcc ggtcctgggc ccagcctggg	240
taccttggc cctctatgg gaatgagggc tgtgggtggg caggatggt cctgtctccc	300
cgtggctccc gccctagtgt gggcccaaat gacccccgc gtagatcac caacttgggt	360
aaggtcatcg atacctcac gtgtggattc gccgatctca tggggtacat tccgctcggt	420
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ggaataaaact ttgcaacagg gaatttggcc gggttgcctt tttctatctt ccttcttgc	540
ctcttctcat gcttggtttc cccgcagcg gggctagagt acaggaacac gtcgggcta	600
tacatactta ccaacgactg ctctaacagc agcatcgtgt atgaggetga taatgtcatc	660
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ccagtaacac cgacagtggc tgtcaaacat cctgggcgag tcacccatc aatccgagg	780

catgtggatt	tgatgggtggg	tgcagccacg	ctgtgttcag	cactctatgt	tggagatttg	840
tgcggggctg	ttttccttgt	gggccaagcg	ttcactttca	gagctcggca	acattatacc	900
gtccagttgt	gcaattgctc	actataccca	ggacacatta	caggacatca	tatggct	957

<210> 221
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 221						
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gacgtaaagt	tcccgggtgg	tggccagatc	gttggcggag	tttacttggt	gcgcgcagg	120
ggccccaggt	tgggtgtgcg	cgcgactcga	aagacttcgg	agcggtcgca	acctcgtggc	180
aggcgtcaac	ctatcccca	ggcgcgccag	ccagagggca	gacccctggg	gcagcccg	240
tacccttggc	ccctctatgg	caatgagggc	tgcgggtggg	caggggtggc	cctgtctcct	300
cgcggctctc	ggccatcttg	gggccccaat	gatccccggc	ggagatcgcg	caatctgggt	360
aaggctcatg	ataccctgac	gtgcggcttc	gcgcacctca	tgggatacat	cccgatcgtg	420
ggcgcccccg	tggggggcgt	cgcaggggt	ctggcgcgatg	gcgtcagggc	tgtggaggac	480
gggattaact	atgcaacagg	gaatcttccc	ggttgcctct	tctctatctt	ccttttggca	540
cttctttcgt	gcctcactgt	tccagcgtcg	gctgagcact	accggaatgc	ttcgggcac	600
tatcacatca	ccaatgattg	tccgaattcc	agtatagtct	atgaagctga	ccatcacatc	660
ctacacttgc	cggggtgcgt	acctgtgtg	atgactggga	acacatcgog	ttgctggacg	720
ccggtgacgc	ctacagtggc	tgtcgcacac	ccgggcgcgc	cgtttgagtc	gttcgggcga	780
catgtggact	taatggtagg	cgcggccact	ttgtgttctg	ccctctatgt	tggggacctc	840
tgcggagggtg	ccttctgat	ggggcagatg	atcacttttc	ggcgcgcgtc	ccactggacc	900
acgcaggagt	gcaattgttc	catctacact	ggccatatca	ccggccacag	gatggcg	957

<210> 222
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 222

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atgagcaciaa atcctaaacc tcaaagaaaa accaaacgta acaccaaccg tcgccccatg      60
gatgtgaaat tcccggggcg cgccagatc gttggcgag tttacttget gccgcgcagg      120
ggcccccggt tgggtgtgcg cgcagctcgg aagacttcgg agcggtcaca acctcgtggc      180
aggcgtcagc ctatcccaaa ggcgcgcggg tccgagggca ggtcctgggc tcagcccggg      240
tacccttggc ccccttacgg caatgagggc tgtgggtggg caggggtggt cctgtccccc      300
cgcggttcca ggccgtcttg gggcccaat gatccccggc gtaggtcccg taatctgggt      360
aaagtcatcg ataccctgac gtgtggcttc gccgacctca tgggatacat tccgctcgta      420
ggcgccctg tgggtggcgt cgccagggcc ctggcgcatg gcgtcagggc cgtggaggac      480
ggaattaaat acgcaacagg gaaccttctt ggttgccttt tctctatctt tcttcttgca      540
cttctctcgt gcttgacaac accagcatct gccgtgcaat accggaatgc ttggggcgtc      600
tatcatgtca ccaatgattg ccctaaccac agcatagtgt acgagacgga gcaccacatc      660
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catgtagacc tgatgggtggg tggcgctact atgtgttccg ccttctacat tggagatctg      840
tgtggaggcg tcttcctagt gggccagctg ttgcacttcc gaccgcgcgg gcaactggacc      900
accaggatt gcaactgctc catctatcct ggtaacgtct cgggccacag gatggcc      957
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<210> 223

<211> 957

<212> DNA

<213> hepatitis C virus

<400> 223

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gacgttaagt tcccggggcg tggccagatc gttggcgag tttacttgtt gccgcgcagg      120
ggccccaggt tgggtgtgcg cgcgactagg aagacttcgg agcggtcgca acctcgtggg      180
agacgtcagc ctatcccaaa ggcacgtcga tctgagggaa ggtcctgggc tcagcccggg      240
taccatggc ctctttacgg taatgagggg tgcgggtggg cgggatgggt cctgtcacct      300
cgtggctctc gaccgtcttg gggcccaat gatccccggc gaagggtccc caacttgggt      360
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aaggatcatcg ataccctaac ctgcggcttt gccgacctca tgggatacat cccgctcgta	420
ggcgcccccg tgggtggcgt cgcagaggcc ctggcacacg gtgttagggc tgtggaggac	480
gggatcaatt atgcgacagg gaattctccc ggttgccttt tctctatctt cttcttggca	540
cttctttcgt gctgactgt tcccacctcg gccgtcaact atcgcaatgc ctcgggcatc	600
tatcacatca ccaatgactg cccgaactcg agcatagtgt acgagaccga gcaccacatc	660
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gccctcactc ccaccgtggc ggcgccttac atcggcgtc cgttgaatc cctccggagt	780
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tgcggtggcg tatTTTTTggt tggtcagatg ttctctttcc agccgcgcg ccactggact	900
acgcaggact gcaattgttc catctacgcg gggcacgtta cgggccacag gatggca	957

<210> 224
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 224	
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gacgttaagt tcccgggtgg cggccagatc gttggcggag ttacttgtt gccgcgcagg	120
ggccctagat tgggtgtgcg cgcgactagg aagacttcgg agcggtcgca acctcgtggg	180
aggcgccagc ctatcccca ggcgcgcca ctcgagggtg ggtcctgggc tcagcctggg	240
tatccttggc ccctttacgg caatgagggc tgcgggtggg cgggatggct cctgtcacc	300
cgtggctctc ggccgtcttg gggccgaat gatccccggc ggagggtccg caacttgggt	360
aaggatcatcg ataccctaac ttgcggcttc gccgacctca tgggatacat cccggtcgta	420
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ggggtcaatt atgcaacagg gaattctccc ggttgccttt tctctatctt cctcttggca	540
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taccatgtca ccaacgattg cccgaactcg agcatagtct atgaaaccga ttaccacatc	660
ttacacctcc cgggatgcgt tcttgcgtg agggaaggga acaagtctac atgctgggtg	720

tctctcacc	ccaccgtggc	tgcgcaacat	ctgaatgctc	cgtttgagtc	tttgagacgt	780
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tgtgggggtg	tgttcttgg	cggtcaactg	ttcaccttcc	aacctcgccg	ccactggacc	900
acccaagact	gcaattgttc	catctacaca	ggacatatca	caggacacag	aatggct	957

<210> 225
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 225						
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gacgttaagt	tcccgggtgg	tggccagatc	gttggcggag	tttacttgtt	gcgcgcagg	120
ggccctaggt	tgggtgtgcg	cgcgactcgg	aagacttcgg	agcggtcgca	acctcgtggg	180
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cgcgggtctc	ggcgtcttg	gggcctaata	gatccccggc	ggaggtcccg	caacctgggt	360
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ggcgcgcccg	tgggtggcgt	cgcagagcc	ctggcacacg	gtgttagggc	tgtggaagac	480
gggatcaact	acgcaacagg	gaatctccc	ggttgcctct	tttctatctt	cctcttggca	540
cttctctcgt	gcctcactgt	tccgcgtcg	ggcgttaact	atcgcaatgc	ttcgggcgtt	600
tatcacatca	ccaacgactg	ccggaatgcg	agcatagtgt	acgagaccga	caatcacatc	660
ttacacctcc	cagggtgcgt	acctgtgtg	aagaccggga	accagtcgcg	gtgttgggtg	720
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tgcggtggt	tattcttgg	aggccaaatg	ttcaccttcc	aaccgcgacg	ccactggacg	900
accaggaact	gtaattgttc	catctacgca	gggcatatta	cgggcatcgc	gatggct	957

<210> 226
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<400> 226
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ggccctagga tgggtgtgcg cgcgactcgg aagacttcgg aacggctgca acccgtgga 180
cggcgtcagc ctattcccaa ggcgcgccag cccacgggcc ggtcctgggg tcaaccggg 240
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gtgcagaact gcaactgttc catttacagt ggccatgtta ccggccaccg gatggca 957

<210> 227
<211> 957
<212> DNA
<213> hepatitis C virus

<400> 227
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ggcccccggt tgggtgtgcg cgcgacgaga aagacttcgg agcgatccca gccagaggc 180
aggcgccaac ctataccaaa ggcgcgccag cccacgggca ggcactgggc tcagcccgga 240

tacccttggc ctctttatgg aaacgagggc tgtgggtggg caggttggt cctgtcccc	300
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aaggatcatg ataccctaac gtgtgggttc gccgatctca tggggtacat tcccgctgtg	420
ggcgcgcctt tgggcggcgt cgcggctgcg ctgcacatg gcgtgagggc aatcgaggac	480
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taccatctca caaatgattg ccccaactcc agcatcgtgc tggaggcgga tgctatgac	660
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gctgtgaccc ccacctggc cataccaaat gcttcacgc ccgcaacggg attccgcagg	780
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tgtggctctc tcttttggc gggacaacta ttcaccttc agccccgcg tcattggact	900
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<210> 228
 <211> 957
 <212> DNA
 <213> hepatitis C virus

<220>
 <221> misc_feature
 <222> (383)..(383)
 <223> n represents any nucleotide

<220>
 <221> misc_feature
 <222> (387)..(387)
 <223> n represents any nucleotide

<220>
 <221> misc_feature
 <222> (924)..(924)
 <223> n represents any nucleotide

<220>
 <221> misc_feature
 <222> (928)..(928)
 <223> n represents any nucleotide

<400> 228
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ggccctcggt tgggtgtgcg cgcgacgaga aagacctccg aacggtccca gcctagaggc 180
aggcgccagc ccataccaaa ggtacgccag ccgacaggcc gtagctgggg tcaacccggc 240
tacccttggc ccctttatgg caacgagggc tgcggatggg cgggatggct cctgtcccc 300
cgcgggtctc gtctaattg gggccccaac gacccccggc gaaggtcccg caacttgggt 360
aaggtcatcg atacccttac atnccgncta gccgacctca tggggtacat cctgtccta 420
ggaggggcgc ttggcggcgt tgcggctgcc ctggcgcatg gcgttagggc aatcgaggac 480
ggggtcaatt acgcaacagg gaatcttctt ggttgcctct tttctatctt cctcttagca 540
ctgttatcgt gcctcactac accagcctca gcaattcaag tcaagaacgc ctctgggatc 600
taccatctta ccaatgactg ctgaacaac agcatcgttt ttgaggcgga gaccatgata 660
ctgcatcttc caggtttgtgt cccatgtatc aaggcgggga atgagtcacg atgttggctc 720
cctgtctccc ccaccttagc cgtccccaac tcatcagtgc caatccacgg gtttcgccga 780
cacgtagacc tcctcgttgg ggcagcggca ttttgttcgg ccatgtacat cggagacctc 840
tgtggtagca taatcttggt agggcagctt tttactttca ggcctaagta ccatcaggtt 900
accagggatt gtaactgctc tatnaacnct ggccacgtca cgggacacag gatggca 957

<210> 229
<211> 319
<212> PRT
<213> hepatitis C virus

<400> 229

Met Ser Thr Asn Pro Lys Pro Gln Lys Lys Asn Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu
130 135 140

Gly Gly Ala Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
145 150 155 160

Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr
180 185 190

Gln Val Arg Asn Ser Thr Gly Leu Tyr His Val Thr Asn Asp Cys Pro
195 200 205

Asn Ser Ser Ile Val Tyr Glu Ala Ala Asp Ala Ile Leu His Thr Pro
210 215 220

Gly Cys Val Pro Cys Val Arg Glu Gly Asn Ala Ser Arg Cys Trp Val
225 230 235 240

Ala Met Thr Pro Thr Val Ala Thr Arg Asp Gly Lys Leu Pro Ala Thr
245 250 255

Gln Leu Arg Arg His Ile Asp Leu Leu Val Gly Ser Ala Thr Leu Cys
260 265 270

Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val Gly
275 280 285

Gln Leu Phe Thr Phe Ser Pro Arg Arg His Trp Thr Thr Gln Gly Cys
290 295 300

Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Ala
305 310 315

<210> 230
<211> 319
<212> PRT
<213> hepatitis C virus

<400> 230

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Met Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu
130 135 140

Gly Gly Ala Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
145 150 155 160

Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Ile Pro Ala Ser Ala Tyr
180 185 190

Glu Val Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys Ser
195 200 205

Asn Ser Ser Ile Val Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro
210 215 220

Gly Cys Val Pro Cys Val Arg Glu Ser Asn Phe Ser Arg Cys Trp Val
225 230 235 240

Ala Leu Thr Pro Thr Leu Ala Ala Arg Asn Ser Ser Ile Pro Thr Thr
245 250 255

Thr Ile Arg Arg His Val Asp Leu Leu Val Gly Ala Ala Ala Leu Cys
260 265 270

Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser
275 280 285

Gln Leu Phe Thr Phe Ser Pro Arg Arg Tyr Glu Thr Val Gln Asp Cys
290 295 300

Asn Cys Ser Ile Tyr Pro Gly His Val Ser Gly His Arg Met Ala
305 310 315

<210> 231

<211> 319

<212> PRT

<213> hepatitis C virus

<400> 231

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Asp Arg Arg Ser Thr Gly Lys Ser Trp Gly Lys Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg His Arg Ser Arg Asn Val Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Leu
130 135 140

Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
145 150 155 160

Gly Val Asn Phe Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Ile Thr Thr Pro Val Ser Ala Ala
180 185 190

Glu Val Lys Asn Ile Ser Thr Gly Tyr Met Val Thr Asn Asp Cys Thr
195 200 205

Asn Asp Ser Ile Thr Trp Gln Leu Gln Ala Ala Val Leu His Val Pro

210 215 220
 Gly Cys Val Pro Cys Glu Lys Val Gly Asn Thr Ser Arg Cys Trp Ile
 225 230 235 240
 Pro Val Ser Pro Asn Val Ala Val Gln Gln Pro Gly Ala Leu Thr Gln
 245 250 255
 Gly Leu Arg Thr His Ile Asp Met Val Val Met Ser Ala Thr Leu Cys
 260 265 270
 Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Gly Val Met Leu Ala Ala
 275 280 285
 Gln Met Phe Ile Val Ser Pro Gln His His Trp Phe Val Gln Asp Cys
 290 295 300
 Asn Cys Ser Ile Tyr Pro Gly Thr Ile Thr Gly His Arg Met Ala
 305 310 315

<210> 232
 <211> 319
 <212> PRT
 <213> hepatitis C virus

<400> 232

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
 1 5 10 15
 Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
 20 25 30
 Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
 35 40 45
 Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
 50 55 60
 Ile Pro Lys Asp Arg Arg Ser Thr Gly Lys Ser Trp Gly Lys Pro Gly
 65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Thr Trp Gly Pro Thr Asp Pro
100 105 110

Arg His Arg Ser Arg Asn Leu Gly Arg Val Ile Asp Thr Ile Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Val
130 135 140

Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
145 150 155 160

Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Val Thr Val Pro Val Ser Ala Val
180 185 190

Glu Val Arg Asn Ile Ser Ser Ser Tyr Tyr Ala Thr Asn Asp Cys Ser
195 200 205

Asn Asn Ser Ile Thr Trp Gln Leu Thr Asp Ala Val Leu His Leu Pro
210 215 220

Gly Cys Val Pro Cys Glu Asn Asp Asn Gly Thr Leu His Cys Trp Ile
225 230 235 240

Gln Val Thr Pro Asn Val Ala Val Lys His Arg Gly Ala Leu Thr Arg
245 250 255

Ser Leu Arg Thr His Val Asp Met Ile Val Met Ala Ala Thr Ala Cys
260 265 270

Ser Ala Leu Tyr Val Gly Asp Val Cys Gly Ala Val Met Ile Leu Ser
275 280 285

Gln Ala Phe Met Val Ser Pro Gln Arg His Asn Phe Thr Gln Glu Cys
290 295 300

Asn Cys Ser Ile Tyr Gln Gly His Ile Thr Gly His Arg Met Ala
305 310 315

<210> 233
<211> 319
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (319)..(319)
<223> Xaa represents any amino acid

<400> 233

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Asp Arg Arg Thr Thr Gly Lys Ser Trp Gly Arg Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
100 105 110

Arg His Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Val

130	135	140
Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp		
145	150	155 160
Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile		
	165	170 175
Phe Leu Ser Ala Leu Leu Ser Cys Ile Ser Val Pro Val Ser Ala Val		
	180	185 190
Glu Val Lys Asn Thr Ser Thr Ser Tyr Met Val Thr Asn Asp Cys Ser		
	195	200 205
Asn Ser Ser Ile Val Trp Gln Leu Glu Gly Ala Val Leu His Thr Pro		
	210	215 220
Gly Cys Val Pro Cys Glu Gln Ile Gly Asn Ala Ser Arg Cys Trp Val		
225	230	235 240
Pro Val Ser Pro Asn Val Ala Ile Arg Gln Pro Gly Thr Leu Thr Lys		
	245	250 255
Gly Leu Arg Ala His Val Asp Val Ile Val Met Ser Ala Thr Leu Cys		
	260	265 270
Ser Ala Leu Tyr Val Gly Asp Val Cys Gly Ala Leu Met Ile Ala Ala		
	275	280 285
Gln Ala Val Ile Ala Ser Pro Gln Arg His Thr Phe Val Gln Glu Cys		
	290	295 300
Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Xaa		
305	310	315

<210> 234
 <211> 319
 <212> PRT
 <213> hepatitis C virus

<400> 234

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Asp Arg Arg Pro Thr Gly Lys Ser Trp Gly Lys Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
100 105 110

Arg His Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Val
130 135 140

Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
145 150 155 160

Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Ile Thr Val Pro Val Ser Gly Leu
180 185 190

Gln Val Lys Asn Thr Ser Ser Ser Tyr Met Val Thr Asn Asp Cys Gln
195 200 205

Asn Ser Ser Ile Val Trp Gln Leu Arg Asp Ala Val Leu His Val Pro
210 215 220

Gly Cys Val Pro Cys Glu Glu Lys Gly Asn Ile Ser Arg Cys Trp Ile
225 230 235 240

Pro Val Ser Pro Asn Ile Ala Val Ser Gln Pro Gly Ala Leu Thr Lys
245 250 255

Gly Leu Arg Thr His Ile Asp Thr Ile Ile Ala Ser Ala Thr Phe Cys
260 265 270

Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Ala Val Met Leu Ala Ser
275 280 285

Gln Val Phe Ile Ile Ser Pro Gln His His Lys Phe Val Gln Asp Cys
290 295 300

Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Ala
305 310 315

<210> 235
<211> 419
<212> PRT
<213> hepatitis C virus

<400> 235

Met Ser Thr Leu Pro Lys Pro Gln Arg Gln Thr Lys Arg Asn Thr Leu
1 5 10 15

Arg Arg Pro Gln Asn Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Val Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Val Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Lys Gln Arg His Leu
50 55 60

Ile Pro Lys Ala Arg Ser Arg Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Lys Gly Cys Gly Leu Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Phe Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Val
130 135 140

Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Ala Leu Gly Asp
145 150 155 160

Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Phe Ser Cys Leu Thr Cys Pro Ala Ser Gly Leu
180 185 190

Glu Tyr Thr Asn Thr Ser Gly Leu Tyr Val Leu Thr Asn Asp Cys Ser
195 200 205

Asn Gly Ser Ile Val Tyr Glu Ala Glu Asp Val Ile Leu His Leu Pro
210 215 220

Gly Cys Val Pro Cys Val Thr Thr Gly Asn Gln Ser Ser Cys Trp Thr
225 230 235 240

Thr Val Ser Thr Thr Val Ala Val Arg Thr Leu Gly Val Thr Thr Ala
245 250 255

Ser Ile Arg Thr His Val Asp Met Leu Val Gly Ala Arg Gln Leu Cys
260 265 270

Ser Ala Leu Tyr Val Gly Asp Ala Phe Gly Ala Val Phe Leu Val Gly
275 280 285

Gln Ala Phe Thr Phe Arg Pro Arg Arg His Thr Thr Val Gln Thr Cys
290 295 300

Asn Cys Ser Ile Tyr Pro Gly His Val Ser Gly His Arg Met Ala Trp
305 310 315 320

Asp Met Met Met Asn Trp Ser Pro Thr Ile Gly Leu Val Ile Ser His
325 330 335

Leu Met Arg Leu Pro Gln Thr Leu Phe Asp Leu Val Ser Gly Thr His
340 345 350

Trp Gly Val Met Ala Gly Leu Ala Tyr Phe Ser Met Gln Gly Asn Trp
355 360 365

Ala Lys Val Val Ile Val Leu Ile Met Phe Ser Gly Val Asp Ala Asn
370 375 380

Thr Tyr Thr Thr Ala Gly Ser Met Ala Gln Ser Ile Tyr Arg Leu Thr
385 390 395 400

Asp Ile Phe Ser Thr Gly Pro Ser Gln Lys Leu Gln Leu Val Asn Ser
405 410 415

Asn Gly Ser

<210> 236
<211> 383
<212> PRT
<213> hepatitis C virus

<400> 236

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Gln Leu Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Val
130 135 140

Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Leu Leu Glu Asp
145 150 155 160

Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr
180 185 190

Asn Tyr Arg Asn Ser Ser Gly Val Tyr His Val Thr Asn Asp Cys Pro
195 200 205

Asn Ser Ser Ile Val Tyr Glu Thr Asp Tyr His Ile Leu His Leu Pro
210 215 220

Gly Cys Val Pro Cys Val Arg Glu Gly Asn Lys Ser Thr Cys Trp Val
225 230 235 240

Ser Leu Thr Pro Thr Val Ala Ala Gln His Leu Asn Ala Pro Leu Glu
245 250 255

Ser Leu Arg Arg His Val Asp Leu Met Val Gly Gly Ala Thr Leu Cys
260 265 270

Ser Ala Leu Tyr Ile Gly Asp Val Cys Gly Gly Val Phe Leu Val Gly
275 280 285

Gln Leu Phe Thr Phe Gln Pro Arg Arg His Trp Thr Thr Gln Asp Cys

290 295 300
 Asn Cys Ser Ile Tyr Thr Gly His Ile Thr Gly His Arg Met Ala Trp
 305 310 315 320
 Asp Met Met Met Asn Trp Ser Pro Thr Ala Thr Leu Val Leu Ala Gln
 325 330 335
 Leu Met Arg Ile Pro Gly Ala Met Val Asp Leu Leu Ala Gly Gly His
 340 345 350
 Trp Gly Ile Leu Val Gly Ile Ala Tyr Phe Ser Met Gln Ala Asn Trp
 355 360 365
 Ala Lys Val Ile Leu Val Leu Phe Leu Phe Ala Gly Val Asp Ala
 370 375 380

<210> 237
 <211> 319
 <212> PRT
 <213> hepatitis C virus

<220>
 <221> MISC_FEATURE
 <222> (102)..(102)
 <223> Xaa represents any amino acid

<220>
 <221> MISC_FEATURE
 <222> (105)..(105)
 <223> Xaa represents any amino acid

<220>
 <221> MISC_FEATURE
 <222> (114)..(114)
 <223> Xaa represents any amino acid

<400> 237

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
 1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Thr Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Xaa Ser Arg Xaa Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Xaa Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Val
130 135 140

Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Ala Val Glu Asp
145 150 155 160

Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Thr Ser Ala Val
180 185 190

Asn Tyr Arg Asn Ala Ser Gly Ile Tyr His Ile Thr Asn Asp Cys Pro
195 200 205

Asn Ala Ser Ile Val Tyr Glu Thr Glu Asn His Ile Leu His Leu Pro
210 215 220

Gly Cys Val Pro Cys Val Arg Thr Gly Asn Gln Ser Arg Cys Trp Val
225 230 235 240

Ala Leu Thr Pro Thr Val Ala Ser Pro Tyr Ala Gly Ala Pro Leu Glu
245 250 255

Pro Leu Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr Met Cys
260 265 270

Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Leu Phe Leu Val Gly
275 280 285

Gln Met Phe Thr Phe Gln Pro Arg Arg His Trp Thr Thr Gln Asp Cys
290 295 300

Asn Cys Ser Ile Tyr Thr Gly His Ile Thr Gly His Arg Met Ala
305 310 315

<210> 238
<211> 319
<212> PRT
<213> hepatitis C virus

<400> 238

Met Ser Thr Asn Pro Lys Leu Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro

100	105	110
Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys		
115	120	125
Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Val		
130	135	140
Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Ala Val Glu Asp		
145	150	155
Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile		
	165	170
		175
Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Gly Val		
	180	185
		190
Asn Tyr Arg Asn Ala Ser Gly Val Tyr His Ile Thr Asn Asp Cys Pro		
195	200	205
Asn Ala Ser Ile Val Tyr Glu Thr Asp Asn His Ile Leu His Leu Pro		
210	215	220
Gly Cys Val Pro Cys Val Lys Thr Gly Asn Gln Ser Arg Cys Trp Val		
225	230	235
		240
Ala Leu Thr Pro Thr Val Ala Ser Pro Tyr Val Gly Ala Pro Leu Glu		
	245	250
		255
Pro Leu Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr Val Cys		
	260	265
		270
Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Gly Leu Phe Leu Val Gly		
275	280	285
Gln Met Phe Thr Phe Gln Pro Arg Arg His Trp Thr Thr Gln Asp Cys		
290	295	300
Asn Cys Ser Ile Tyr Ala Gly His Ile Thr Gly His Arg Met Ala		
305	310	315

<210> 239
<211> 319
<212> PRT
<213> hepatitis C virus

<400> 239

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Met Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Gln Pro Thr Gly Arg Ser Trp Gly Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Ala Asn Glu Gly Leu Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Asn Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Lys Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Gly Pro Ile
130 135 140

Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
145 150 155 160

Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Ile Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Val
180 185 190

Pro Tyr Arg Asn Ala Ser Gly Ile Tyr His Val Thr Asn Asp Cys Pro
195 200 205

Asn Ser Ser Ile Val Tyr Glu Ala Asp Asn Leu Ile Leu His Ala Pro
210 215 220

Gly Cys Val Pro Cys Val Met Thr Gly Asn Val Ser Arg Cys Trp Val
225 230 235 240

Gln Ile Thr Pro Thr Leu Ser Ala Pro Ser Leu Gly Ala Val Thr Ala
245 250 255

Pro Leu Arg Arg Ala Val Asp Tyr Leu Ala Gly Gly Ala Ala Leu Cys
260 265 270

Ser Ala Leu Tyr Val Gly Asp Ala Cys Gly Ala Leu Phe Leu Val Gly
275 280 285

Gln Met Phe Thr Tyr Arg Pro Arg Gln His Ala Thr Val Gln Asn Cys
290 295 300

Asn Cys Ser Ile Tyr Ser Gly His Val Thr Gly His Arg Met Ala
305 310 315

<210> 240
<211> 383
<212> PRT
<213> hepatitis C virus

<400> 240

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Thr Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Gln Pro Gln Gly Arg His Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro His Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Leu
130 135 140

Gly Gly Val Ala Ala Ala Leu Ala His Gly Val Arg Ala Ile Glu Asp
145 150 155 160

Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Thr Pro Ala Ser Ala Leu
180 185 190

Thr Tyr Gly Asn Ser Ser Gly Leu Tyr His Leu Thr Asn Asp Cys Pro
195 200 205

Asn Ser Ser Ile Val Leu Glu Ala Asp Ala Met Ile Leu His Leu Pro
210 215 220

Gly Cys Leu Pro Cys Val Arg Val Asp Asp Arg Ser Thr Cys Trp His
225 230 235 240

Ala Val Thr Pro Thr Leu Ala Ile Pro Asn Ala Ser Thr Pro Ala Thr
245 250 255

Gly Phe Arg Arg His Val Asp Leu Leu Ala Gly Ala Ala Val Val Cys
260 265 270

Ser Ser Leu Tyr Ile Gly Asp Leu Cys Gly Ser Leu Phe Leu Ala Gly

275

280

285

Gln Leu Phe Thr Phe Gln Pro Arg Arg His Trp Thr Val Gln Asp Cys
 290 295 300

Asn Cys Ser Ile Tyr Thr Gly His Val Thr Gly His Arg Met Ala Trp
 305 310 315 320

Asp Met Met Met Asn Trp Ser Pro Thr Thr Thr Leu Val Leu Ser Ser
 325 330 335

Ile Leu Arg Val Pro Glu Ile Cys Ala Ser Val Ile Phe Gly Gly His
 340 345 350

Trp Gly Ile Leu Leu Ala Val Ala Tyr Phe Gly Met Ala Gly Asn Trp
 355 360 365

Leu Lys Val Leu Ala Val Leu Phe Leu Phe Ala Gly Val Glu Ala
 370 375 380

<210> 241
 <211> 193
 <212> PRT
 <213> hepatitis C virus

<400> 241

Thr Cys Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala
 1 5 10 15

Pro Val Gly Gly Val Ala Arg Ala Leu Glu His Gly Val Arg Ala Val
 20 25 30

Glu Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe
 35 40 45

Ser Ile Ser Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Thr Ser
 50 55 60

Ala Val Asn Tyr Arg Asn Ala Ser Gly Val Tyr His Ile Thr Asn Asp
 65 70 75 80

Cys Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp Tyr His Ile Leu His
85 90 95

Leu Pro Gly Cys Leu Pro Cys Val Arg Val Gly Asn Gln Ser Arg Cys
100 105 110

Trp Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Val Gly Ala Pro
115 120 125

Leu Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr
130 135 140

Val Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Val Phe Leu
145 150 155 160

Val Gly Gln Met Phe Ser Phe Gln Pro Arg Arg His Trp Thr Thr Gln
165 170 175

Asp Cys Asn Cys Ser Ile Tyr Ala Gly His Val Thr Gly His Arg Met
180 185 190

Ala

<210> 242
<211> 193
<212> PRT
<213> hepatitis C virus

<400> 242

Thr Cys Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala
1 5 10 15

Pro Val Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Ala Val
20 25 30

Glu Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe
35 40 45

Ser Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser
50 55 60

Ala Val His Tyr His Asn Thr Ser Gly Ile Tyr His Leu Thr Asn Asp
65 70 75 80

Cys Pro Asn Ser Ser Ile Val Phe Glu Ala Val His His Ile Leu His
85 90 95

Leu Pro Gly Cys Val Pro Cys Val Arg Thr Gly Asn Gln Ser Arg Cys
100 105 110

Trp Val Ala Leu Thr Pro Thr Leu Ala Ala Pro Tyr Leu Gly Ala Pro
115 120 125

Leu Glu Ser Met Arg Arg His Val Asp Leu Met Val Gly Thr Ala Thr
130 135 140

Leu Cys Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Gly Ile Phe Leu
145 150 155 160

Ala Gly Gln Met Phe Thr Phe Arg Pro Arg Leu His Trp Thr Thr Gln
165 170 175

Glu Cys Asn Cys Ser Thr Tyr Pro Gly His Ile Thr Gly His Arg Met
180 185 190

Ala

<210> 243
<211> 193
<212> PRT
<213> hepatitis C virus

<400> 243

Thr Cys Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala
1 5 10 15

Pro Val Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Ala Val
20 25 30

Glu Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe
35 40 45

Ser Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser
50 55 60

Ala Gln His Tyr Arg Asn Ile Ser Gly Ile Tyr His Val Thr Asn Asp
65 70 75 80

Cys Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Met His
85 90 95

Leu Pro Gly Cys Val Pro Cys Val Arg Thr Gly Asn Thr Ser Arg Cys
100 105 110

Trp Val Pro Leu Thr Pro Thr Val Ala Ala Pro Tyr Val Gly Ala Pro
115 120 125

Leu Glu Ser Met Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr
130 135 140

Val Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Val Phe Leu
145 150 155 160

Val Gly Gln Met Phe Thr Phe Arg Pro Arg Arg His Trp Thr Thr Gln
165 170 175

Asp Cys Asn Cys Ser Ile Tyr Asp Gly His Ile Thr Gly His Arg Met
180 185 190

Ala

<210> 244
<211> 193
<212> PRT
<213> hepatitis C virus

<400> 244

Thr Cys Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala
1 5 10 15

Pro Val Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Ala Val
20 25 30

Glu Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe
35 40 45

Ser Ile Phe Leu Leu Val Leu Leu Ser Arg Leu Thr Val Pro Ala Ser
50 55 60

Ala Gln His Tyr Arg Asn Ala Ser Gly Ile Tyr His Val Thr Asn Asp
65 70 75 80

Cys Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Met His
85 90 95

Leu Pro Gly Cys Val Pro Cys Val Arg Thr Gly Asn Val Ser Arg Cys
100 105 110

Trp Ile Pro Leu Thr Pro Thr Val Ala Val Pro Tyr Leu Gly Ala Pro
115 120 125

Leu Thr Ser Val Arg Gln His Val Asp Leu Met Val Gly Ala Ala Thr
130 135 140

Leu Cys Ser Ala Leu Tyr Ile Gly Asp His Cys Gly Gly Val Phe Leu
145 150 155 160

Ala Gly Gln Met Val Ser Phe Gln Pro Arg Arg His Trp Thr Thr Gln
165 170 175

Asp Cys Asn Cys Ser Ile Tyr Val Gly His Ile Thr Gly His Arg Met
180 185 190

Ala

<210> 245

<211> 149

<212> PRT

<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (14)..(14)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (20)..(20)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (120)..(120)
<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (134)..(134)
<223> Xaa represents any amino acid

<400> 245

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Ile Pro Gly Cys Xaa Phe Ser
1 5 10 15

Ile Phe Leu Xaa Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
20 25 30

Thr Asn Tyr Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys
35 40 45

Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu Ala Leu
50 55 60

Pro Gly Cys Val Pro Cys Val Arg Val Gly Asn Gln Ser Arg Cys Trp
65 70 75 80

Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Thr Ala Ala Pro Leu
85 90 95

Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val
100 105 110

Cys Ser Ala Leu Tyr Ile Gly Xaa Leu Cys Gly Gly Leu Phe Leu Val
115 120 125

Gly Gln Met Phe Ser Xaa Gln Pro Arg Arg His Trp Thr Thr Gln Asp
130 135 140

Cys Asn Cys Ser Ile
145

<210> 246
<211> 119
<212> PRT
<213> hepatitis C virus

<400> 246

Tyr His Ile Thr Asn Asp Cys Pro Asn Ser Ser Val Val Tyr Glu Thr
1 5 10 15

Asp His His Ile Leu His Leu Pro Gly Cys Val Pro Cys Val Arg Thr
20 25 30

Gly Asn Val Ser Arg Cys Trp Thr Pro Val Thr Pro Thr Val Ala Ala
35 40 45

Val Ser Val Asp Ala Pro Leu Glu Ser Phe Arg Arg His Val Asp Leu
50 55 60

Met Val Gly Ala Ala Thr Leu Cys Ser Val Leu Tyr Val Gly Asp Leu
65 70 75 80

Cys Gly Gly Ala Phe Leu Val Gly Gln Met Phe Thr Phe Gln Pro Arg
85 90 95

Arg His Trp Thr Thr Gln Asp Cys Asn Cys Ser Ile Tyr Thr Gly His
100 105 110

Ile Thr Gly His Arg Met Ala
115

<210> 247
<211> 94
<212> PRT
<213> hepatitis C virus

<400> 247

Pro Gln Arg Lys Thr Lys Arg Asn Thr Ile Arg Arg Pro Gln Asp Val
1 5 10 15

Lys Phe Pro Gly Gly Gly Gln Ile Val Gly Gly Val Tyr Val Leu Pro
20 25 30

Arg Arg Gly Pro Arg Leu Gly Val Cys Ala Thr Arg Lys Thr Ser Glu
35 40 45

Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg Arg
50 55 60

Ser Glu Gly Arg Ser Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu Tyr
65 70 75 80

Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp Leu Leu Ser Pro
85 90

<210> 248
<211> 100
<212> PRT
<213> hepatitis C virus

<400> 248

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Ile
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Val Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro
100

<210> 249
<211> 100
<212> PRT
<213> hepatitis C virus

<400> 249

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro
100

<210> 250
<211> 68
<212> PRT
<213> hepatitis C virus

<400> 250

Thr Asn Arg Arg Pro Thr Asp Val Lys Phe Pro Gly Gly Gly Gln Ile
1 5 10 15

Val Gly Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val
20 25 30

Arg Ala Thr Gly Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg
35 40 45

Gln Pro Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln
50 55 60

Pro Gly Phe Pro
65

<210> 251
<211> 80
<212> PRT
<213> hepatitis C virus

<400> 251

Lys Thr Lys Arg Asn Thr Asn Arg Arg Pro Met Asp Val Lys Phe Pro
1 5 10 15

Gly Gly Gly Gln Ile Val Gly Gly Val Tyr Leu Leu Pro Arg Arg Gly
20 25 30

Pro Arg Leu Gly Val Arg Ala Thr Arg Lys Thr Ser Glu Arg Ser Gln
35 40 45

Pro Arg Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg Arg Ser Glu Gly
50 55 60

Arg Ser Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu Tyr Gly Asn Glu
65 70 75 80

<210> 252
<211> 74
<212> PRT
<213> hepatitis C virus

<400> 252

Thr Asn Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile
1 5 10 15

Val Gly Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val
20 25 30

Arg Ala Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg
35 40 45

Gln Pro Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln
50 55 60

Pro Gly Tyr Pro Trp Pro Leu Tyr Gly Lys
65 70

<210> 253
<211> 100
<212> PRT
<213> hepatitis C virus

<400> 253

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly

20

25

30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
 35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
 50 55 60

Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln Ala Gly
 65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
 85 90 95

Leu Leu Ser Pro
 100

<210> 254
 <211> 128
 <212> PRT
 <213> hepatitis C virus

<400> 254

Val Glu Val Lys Asp Thr Gly Asp Ser Tyr Met Pro Thr Asn Asp Cys
 1 5 10 15

Ser Asn Ser Ser Ile Val Trp Gln Leu Glu Gly Ala Val Leu His Thr
 20 25 30

Pro Gly Cys Val Pro Cys Glu Arg Thr Ala Asn Val Ser Arg Cys Trp
 35 40 45

Val Pro Val Ala Pro Asn Leu Ala Ile Ser Gln Pro Gly Ala Leu Thr
 50 55 60

Lys Gly Leu Arg Ala His Ile Asp Ile Ile Val Met Ser Ala Thr Val
 65 70 75 80

Cys Ser Ala Leu Tyr Val Gly Asp Val Cys Gly Ala Leu Met Leu Ala
 85 90 95

Ala Gln Val Val Val Val Ser Pro Gln His His Thr Phe Val Gln Glu
100 105 110

Cys Asn Cys Ser Ile Tyr Pro Gly Arg Ile Thr Gly His Arg Met Ala
115 120 125

<210> 255
<211> 128
<212> PRT
<213> hepatitis C virus

<400> 255

Leu Glu Trp Arg Asn Thr Ser Gly Leu Tyr Val Leu Thr Asn Asp Cys
1 5 10 15

Ser Asn Ser Ser Ile Val Tyr Glu Ala Asp Asp Val Ile Leu His Thr
20 25 30

Pro Gly Cys Ile Pro Cys Val Gln Asp Gly Asn Thr Ser Thr Cys Trp
35 40 45

Thr Pro Val Thr Pro Thr Val Ala Val Lys Tyr Val Gly Ala Thr Thr
50 55 60

Ala Ser Ile Arg Ser His Val Asp Leu Leu Val Gly Ala Ala Thr Met
65 70 75 80

Cys Ser Ala Leu Tyr Val Gly Asp Met Cys Gly Ala Val Phe Leu Val
85 90 95

Gly Gln Ala Phe Thr Phe Arg Pro Arg Arg His Gln Thr Val Gln Thr
100 105 110

Cys Asn Cys Ser Leu Tyr Pro Gly His Leu Ser Gly His Arg Met Ala
115 120 125

<210> 256
<211> 128
<212> PRT
<213> hepatitis C virus

<400> 256

Glu His Tyr Arg Asn Ala Ser Gly Ile Tyr His Ile Thr Asn Asp Cys
1 5 10 15

Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu
20 25 30

Pro Gly Cys Val Pro Cys Val Met Thr Gly Asn Thr Ser Arg Cys Trp
35 40 45

Thr Pro Val Thr Pro Thr Val Ala Val Ala His Pro Gly Ala Pro Leu
50 55 60

Glu Ser Phe Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr Leu
65 70 75 80

Cys Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Gly Ala Phe Leu Met
85 90 95

Gly Gln Met Ile Thr Phe Arg Pro Arg Arg His Trp Thr Thr Gln Glu
100 105 110

Cys Asn Cys Ser Ile Tyr Thr Gly His Ile Thr Gly His Arg Met Ala
115 120 125

<210> 257

<211> 128

<212> PRT

<213> hepatitis C virus

<400> 257

Glu His Tyr Arg Asn Ala Ser Gly Ile Tyr His Ile Thr Asn Asp Cys
1 5 10 15

Pro Asn Ser Ser Val Val Tyr Glu Thr Asp His His Ile Leu His Leu
20 25 30

Pro Gly Cys Val Pro Cys Val Arg Ala Gly Asn Val Ser Arg Cys Trp
35 40 45

Thr Pro Val Thr Pro Thr Val Ala Ala Val Ser Met Asp Ala Pro Leu
50 55 60

Glu Ser Phe Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr Val
65 70 75 80

Cys Ser Val Leu Tyr Val Gly Asp Leu Cys Gly Gly Ala Phe Leu Val
85 90 95

Gly Gln Met Phe Thr Phe Gln Pro Arg Arg His Trp Thr Thr Gln Asp
100 105 110

Cys Asn Cys Ser Ile Tyr Thr Gly His Ile Thr Gly His Arg Met Ala
115 120 125

<210> 258
<211> 128
<212> PRT
<213> hepatitis C virus

<400> 258

Val His Tyr Arg Asn Ala Ser Gly Val Tyr His Val Thr Asn Asp Cys
1 5 10 15

Pro Asn Thr Ser Ile Val Tyr Glu Thr Glu His His Ile Met His Leu
20 25 30

Pro Gly Cys Val Pro Cys Val Arg Thr Glu Asn Thr Ser Arg Cys Trp
35 40 45

Val Pro Leu Thr Pro Thr Val Ala Ala Pro Tyr Pro Asn Ala Pro Leu
50 55 60

Glu Ser Met Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr Met
65 70 75 80

Cys Ser Ala Phe Tyr Ile Gly Asp Leu Cys Gly Gly Val Phe Leu Val
85 90 95

Gly Gln Leu Phe Asp Phe Arg Pro Arg Arg His Trp Thr Thr Gln Asp
100 105 110

Cys Asn Cys Ser Ile Tyr Pro Gly His Val Ser Gly His Arg Met Ala
115 120 125

<210> 259
<211> 128
<212> PRT
<213> hepatitis C virus

<400> 259

Ile His Tyr Arg Asn Ala Ser Gly Val Tyr His Val Thr Asn Asp Cys
1 5 10 15

Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu
20 25 30

Pro Gly Cys Leu Pro Cys Val Arg Val Gly Asn Gln Ser Arg Cys Trp
35 40 45

Val Ala Leu Ser Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Val
50 55 60

Glu Ser Phe Arg Arg His Val Asp Met Met Val Gly Ala Ala Thr Val
65 70 75 80

Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Val Phe Leu Val
85 90 95

Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Thr Gln Asp
100 105 110

Cys Asn Cys Ser Ile Tyr Ala Gly His Ile Thr Gly His Gly Met Ala
115 120 125

<210> 260
<211> 128
<212> PRT

<213> hepatitis C virus

<400> 260

Val Asn Tyr Arg Asn Ala Ser Gly Ile Tyr His Ile Thr Asn Asp Cys
1 5 10 15

Pro Asn Ser Ser Ile Val Tyr Glu Thr Glu His His Ile Leu His Leu
20 25 30

Pro Gly Cys Leu Pro Cys Val Arg Val Gly Asn Gln Ser Arg Cys Trp
35 40 45

Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Leu
50 55 60

Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Ala
65 70 75 80

Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Val Phe Leu Val
85 90 95

Gly Gln Met Phe Ser Phe Gln Pro Arg Arg His Trp Thr Thr Gln Asp
100 105 110

Cys Asn Cys Ser Ile Tyr Ala Gly His Val Thr Gly His Arg Met Ala
115 120 125

<210> 261

<211> 169

<212> PRT

<213> hepatitis C virus

<400> 261

Leu Ala His Gly Val Arg Ala Val Glu Asp Gly Ile Asn Tyr Ala Thr
1 5 10 15

Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Leu
20 25 30

Ser Cys Leu Thr Val Pro Ala Ser Ala Val His Tyr His Asn Thr Ser
35 40 45

Gly Ile Tyr His Leu Thr Asn Asp Cys Pro Asn Ser Ser Ile Val Phe
50 55 60

Glu Ala Val His His Ile Leu His Leu Pro Gly Cys Val Pro Cys Val
65 70 75 80

Arg Thr Gly Asn Gln Ser Arg Cys Trp Val Ala Leu Thr Pro Thr Leu
85 90 95

Ala Ala Pro Tyr Leu Gly Ala Pro Leu Glu Ser Met Arg Arg His Val
100 105 110

Asp Leu Met Val Gly Thr Ala Thr Leu Cys Ser Ala Leu Tyr Val Gly
115 120 125

Asp Leu Cys Gly Gly Ile Phe Leu Ala Gly Gln Met Phe Thr Phe Arg
130 135 140

Pro Arg Leu His Trp Thr Thr Gln Glu Cys Asn Cys Ser Thr Tyr Pro
145 150 155 160

Gly His Ile Thr Gly His Arg Met Ala
165

<210> 262
<211> 128
<212> PRT
<213> hepatitis C virus

<400> 262

Val His Tyr His Asn Thr Ser Gly Ile Tyr His Ile Thr Asn Asp Cys
1 5 10 15

Pro Asn Ser Ser Ile Val Phe Glu Ala Glu His His Ile Leu His Leu
20 25 30

Pro Gly Cys Val Pro Cys Val Arg Thr Gly Asn Gln Ser Arg Cys Trp

35

40

45

Ile Ala Leu Thr Pro Thr Leu Ala Ala Pro His Ile Gly Ala Pro Leu
 50 55 60

Glu Ser Met Arg Arg His Val Asp Leu Met Val Gly Thr Ala Thr Leu
 65 70 75 80

Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Ile Phe Leu Val
 85 90 95

Gly Gln Met Phe Asn Phe Arg Pro Arg Leu His Trp Thr Thr Gln Glu
 100 105 110

Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Ala
 115 120 125

<210> 263

<211> 128

<212> PRT

<213> hepatitis C virus

<400> 263

Val Pro Tyr Arg Asn Ala Ser Gly Ile Tyr His Val Thr Asn Asp Cys
 1 5 10 15

Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp Asp Leu Ile Leu His Ala
 20 25 30

Pro Gly Cys Val Pro Cys Val Arg Lys Asp Asn Val Ser Arg Cys Trp
 35 40 45

Val Gln Ile Thr Pro Thr Leu Ser Ala Pro Ser Phe Gly Ala Val Thr
 50 55 60

Ala Pro Leu Arg Arg Ala Val Asp Tyr Leu Val Gly Gly Ala Ala Leu
 65 70 75 80

Cys Ser Ala Leu Tyr Val Gly Asp Ala Cys Gly Ala Leu Phe Leu Val
 85 90 95

Gly Gln Met Phe Thr Tyr Arg Pro Arg Gln His Ala Thr Val Gln Asp
 100 105 110

Cys Asn Cys Ser Ile Tyr Ser Gly His Val Thr Gly His Gln Met Ala
 115 120 125

<210> 264
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 264
 ctccacagtc actgagagcg acatccgtac ggaggaggca atctaccaat gttgtgacct 60
 cgacccccaa gcccgcggtg ccatcaagtc cctcaccgag aggccttatg ttgggggccc 120
 tottaccaat tcaagggggg agaactgcgg ctatcgcagg tgccgcgcga gcggcggtact 180
 gacaactagc tgtggtaaca ccctcacttg ctacatcaag gcccgggcag cctgtcgagc 240
 cgcagggctc caggactgca ccatgctcgt gtgtggcgac gacttagtcg ttatctgtga 300
 aagcgcgggg gtccaggagg acgcggcgag cctgagagcc 340

<210> 265
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 265
 ctcaacggtc actgagaatg acatccgtac tgaggaatca atttaccaat gttgtgactt 60
 ggcccccgaa gccaggcagg ccataaggtc gctcacagag cggccttatg tcgggggtcc 120
 cctgactaat tcgaaggggc agaactgcgg ttatcgcggg tgccgcgcaa gtggcggtgct 180
 gacgactagc tgccgcaaca ccctcacatg ttacttgaag gccactgcgg cctgtcgagc 240
 tgcaaagctc caggactgca cgatgctcgt gaacggagac gaccttgtcg ttatctgtga 300
 gagtgcggga acccaggagg atgcggcggc cctacgagcc 340

<210> 266

<211> 340
<212> DNA
<213> hepatitis C virus

<220>
<221> misc_feature
<222> (1)..(1)
<223> n represents any nucleotide

<400> 266
ntcaacagtc accgagaacg acatccgtgt tgaggagtca atttaccaat gttgtgactt 60
ggcccccgag gccagacagg ccataaagtc gctcacagag cggctttata tcgggggtcc 120
cctgactaat tcaaaggggc agaactgtgg ctatcgccga tgccgcgcaa gcggcgtgct 180
gacgaccagc tgcggtaata cccttacatg ttacctaaag gcctctgcag cctgtcgagc 240
tgcgaaagctc caggactgca cgatgctcgt gtgcggggac gaccttgctg ttatctgtga 300
aagcgcggga acccaagagg acgcggcgag cctacgagtc 340

<210> 267
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 267
ctcaaccgtc actgagagag acatcaggac tgaggagtcc atatatcggg cttgttcctt 60
gcccgaggag gccacactg ccatacactc actgactgag agactttacg tgggagggcc 120
catgttcaac agcaagggcc agacctgcgg gtacaggcgt tgccgcgcca gcggggtgct 180
taccactagc atggggaaca ccatacatg ctatgtgaaa gccttagcgg cctgtaaggc 240
tgcagggata attgcgcca caatgctggt atgcggcgat gacttggttg tcatctcaga 300
gagccagggg accgaggagg acgagcggaa cctgagagcc 340

<210> 268
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 268
 ctcaacogtc acggagaggg acataagaac agaagaatcc atatatcagg cttgttctct 60
 gcctcaagaa gccagaactg tcatacactc gctcactgag agactttacg taggagggcc 120
 catgacaaac agcaaagggc aatcctgcgg ctacaggcgt tgccgcgcaa gcggtgtttt 180
 caccaccagc atggggaata ccatgacatg ttacatcaaa gcccttgag cgtgtaaggc 240
 tgcagggatc gtggaccctg ttatgttggg gtgtggagac gacctggtcg tcattcaga 300
 gagccaaggt aacgaggagg acgagcgaaa cctgagagct 340

<210> 269
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 269
 ctcaactgtc actgaacagg acatcagggt ggaagaggag atataccaat gctgtaacct 60
 tgaaccggag gccaggagag tgatctctc cctcacggag cggctttact gcgggggccc 120
 tatgttcaac agcaaggggg cccaatgtgg ttatcgccgg tgccgtgcc a gtggagtct 180
 gcctaccagc ttcggaaca caatcacttg ttacatcaag gccacagcgg ctgcgaaggc 240
 cgcaggcctc cggaaccgg actttcttgt ctgcggagat gatctggtcg tagtggctga 300
 gagcgatggc gtcgatgagg atagagcagc cctgagagcc 340

<210> 270
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 270
 ctctactgtc actgaacatg acatcaggac ggaggaggag atataccaat gctgtgacct 60
 tgagccagag gctcggaagg cgatcagcgc totcacagag cggctgtaca tcggaggctc 120
 catgtacaac agtaaggggc tccagtgcgg ctatcgccgc tgccgcgcca gcggcgtctt 180
 gcctaccagc ttcggaata caataacctg ttacatcaag gccactgcag ccagcagggc 240

tgcggtctc aaagacccat ctttccttgt ctgggagac gatttgggtg ttgtatctga	300
aagctgcggc gtcgaggagg acagagcagc tctgcgagcc	340

<210> 271
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 271	
ctccactgta accgaaaagg acatcagggg cgaggaggag gtctatcagt gttgtgacct	60
ggagcccgaa gcccgcaagg caattaccgc cctaacagag agactctacg tgggcgggtcc	120
catgcataac agcaaggagg acctgtgcgg gtatcgcaga tgcgcgcaa ggcgcgtcta	180
caccaccagc ttcggaaca cactgacgtg ctacctcaa gcctcagccg ctatcaaagc	240
ggcggggctg agagactgca ccatgttggg ctgtggtgat gacctggttg tcacgctga	300
gagcgatggc gtagaggagg acaaacgacc cctcggagcc	340

<210> 272
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 272	
ctccactgta accgaaaagg acatcagggg cgaggaggag gtatatcagt gttgtgacct	60
ggagcccgag gccgcagag caattaccgc cctaacagag agactctacg tgggcgggtcc	120
catgcataac agcaggggag acctgtgcgg gtatcgcaga tgccgtgcga ggcgcgtcta	180
caccaccagc ttcggaaca cactgacgtg ctatctcaa gcctcagccg ctatcagagc	240
ggcggggctg agagactgca ccatgttggg ctgtggtgat gacctggtcg tcattgctga	300
aagcgatggc gtagaggagg acaaacgagc cctcggagcc	340

<210> 273
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 273
 ctccactgta accgaaaaag acatcagggg cgaggaggag gtatatcagt gttgtgacct 60
 ggagcccgaa gcccgcaagg taattaccgc cctaacagag agactctatg tgggcgggtcc 120
 catgcataat agcaaaggag acctgtgogg gtatcgcaga tgccgcgcaa ggggcgtcta 180
 caccaccagc ttccggaaca cactgacgtg ctatctcaaa gcctcagccg ccacacagggc 240
 gtcagggctg agagactgca ctatgtgtgt ctatggtgac gacctgggtcgc tcattgccga 300
 gagcgatggc gtagaggagg acaaacgagc cctcggagtc 340

<210> 274
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<400> 274
 ctccactgta accgaaaaag acatcagggg cgaggaggag gtgtatcagt gttgtgacct 60
 ggagcccgag gcccgcaagg caattactgc cctaacagag agactctatg tgggcgggtcc 120
 catgcataac agcaagggag acctgtgtgg gtatcgcaga tgccgcgcaa ggggcgtcta 180
 caccaccagc ttccggaaca cactgacgtg ctacctcaaa gcctcagccg ctatcagagc 240
 ggcggggctg agagactgca ccattgttgt ctgtggtgat gacctgggtcgc tcattgcctga 300
 gagcgatggc gttgaggagg acaaacgagc cctcggagcc 340

<210> 275
 <211> 340
 <212> DNA
 <213> hepatitis C virus

<220>
 <221> misc_feature
 <222> (329)..(329)
 <223> n represents any nucleotide

<400> 275
ctccactgtg actgagagag acatcaaggt cgaagaagaa gtctatcagt gttgtgatct 60
ggagcccgag gcccgcaagg taatagccgc cctcacggag agactctacg tgggcggccc 120
catgcataac agcaaggagg acctttgcgg gtatcgtaga tgccgcgca gggcggtata 180
caccaccagc ttcggaaca caatgacgtg ctaccttaag gcctcagcag ccatcagggc 240
tgcggggcta aaggattgca ccatgctggt ttgcggtgac gacctagtcg tgatcgccga 300
gagcgggtggc gttgaggagg acaaacganc cctcggagct 340

<210> 276
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 276
ctccacgggtg accgaaaggg atatcaggac cgaggaagag atctaccagt gctgcgacct 60
ggagcccgaa gcccgcaagg tgatatccgc cctaacggaa agactctacg tgggcgggtcc 120
catgtacaac tccaaggggg acctatgcgg gcaacggagg tgccgcgcaa ggggggtcta 180
caccaccagc ttcggaaca ctgtaacgtg ttatctcaag gccgttgcgg ctactagggc 240
cgcaggtctg aaaggttgca gcatgctggt ttgtggagac gacttagtcg tcctctgcga 300
gagcggcggc gtagaggagg atgcaagagc cctccgagcc 340

<210> 277
<211> 340
<212> DNA
<213> hepatitis C virus

<400> 277
ctcgaccgtt accgaacatg acataatgac tgaagagtct atttaccaat cattgtactt 60
gcagcctgag gcgcgtgtgg caatacggtc actcaccxaa cgccgtgtact gtggaggccc 120
catgtataac agcaaggggc aacaatgtgg ttatcgtaga tgccgcgcca gggcggtctt 180
caccactagt atgggaaca ccatgacgtg ctacattaag gctttagcct cctgtagagc 240
cgcaaagctc caggactgca cgctcctggt gtgtggtgat gatcttgtgg ccatttgcga 300

gagccagggg acgcaagagg ataaagcgag cctgagagcc

340

<210> 278
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 278

Ser Thr Val Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala
65 70 75 80

Ala Gly Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg
100 105 110

Ala

<210> 279
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 279

Ser Thr Val Thr Glu Asn Asp Ile Arg Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Ala Pro Glu Ala Arg Gln Ala Ile Arg Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Thr Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Gln Asp Cys Thr Met Leu Val Asn Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Ala Gly Thr Gln Glu Asp Ala Ala Ala Leu Arg
100 105 110

Ala

<210> 280
<211> 74
<212> PRT
<213> hepatitis C virus

<400> 280

Ile Tyr Gln Cys Cys Asp Leu His Pro Asp Ala Arg Ala Ala Ile Lys
1 5 10 15

Asn Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Lys
20 25 30

Gly Glu Asn Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr
35 40 45

Thr Ser Cys Gly Asn Thr Leu Thr Cys Tyr Ile Lys Ala Leu Ala Ala

50

55

60

Cys Arg Ala Ala Gly Leu Arg Asp Cys Thr
 65 70

<210> 281
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<400> 281

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Arg
 1 5 10 15

Ala Cys Ser Leu Pro Glu Glu Ala His Thr Ala Ile His Ser Leu Thr
 20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Phe Asn Ser Lys Gly Gln Thr
 35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Met
 50 55 60

Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Leu Ala Ala Cys Lys Ala
 65 70 75 80

Ala Gly Ile Ile Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Val Ile Ser Glu Ser Gln Gly Thr Glu Glu Asp Glu Arg Asn Leu Arg
 100 105 110

Ala

<210> 282
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<400> 282

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15

Ala Cys Ser Leu Pro Gln Glu Ala Arg Thr Val Ile His Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Thr Asn Ser Lys Gly Gln Ser
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Met
50 55 60

Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Leu Ala Ala Cys Lys Ala
65 70 75 80

Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Gln Gly Asn Glu Glu Asp Glu Arg Asn Leu Arg
100 105 110

Ala

<210> 283

<211> 74

<212> PRT

<213> hepatitis C virus

<400> 283

Ile Tyr Gln Ser Cys Ser Leu Pro Glu Glu Ala Arg Thr Ala Ile His
1 5 10 15

Ser Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Met Thr Asn Ser Lys
20 25 30

Gly Gln Ser Cys Gly Tyr Arg Arg Cys Arg Ala Ser Ala Val Leu Thr
35 40 45

Thr Ser Met Gly Asn Thr Leu Thr Cys Tyr Val Lys Ala Arg Ala Ala
50 55 60

Cys Asn Ala Ala Gly Ile Val Ala Pro Thr
65 70

<210> 284
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 284

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Leu
1 5 10 15

Ala Cys Ser Leu Pro Glu Gln Ala Arg Thr Ala Ile His Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Leu Asn Ser Lys Gly Gln Thr
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Met
50 55 60

Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Gln Ala Ala Cys Lys Ala
65 70 75 80

Ala Gly Ile Ile Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Gln Gly Thr Glu Glu Asp Glu Arg Asn Leu Arg
100 105 110

Ala

<210> 285
<211> 71
<212> PRT

<213> hepatitis C virus

<400> 285

Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
1 5 10 15

Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
20 25 30

Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
35 40 45

Arg Ala Ala Gly Leu Arg Asn Pro Asp Phe Leu Val Cys Gly Asp Asp
50 55 60

Leu Val Val Val Ala Glu Ser
65 70

<210> 286

<211> 71

<212> PRT

<213> hepatitis C virus

<400> 286

Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
1 5 10 15

Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
20 25 30

Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
35 40 45

Lys Ala Ala Gly Leu Arg Ser Pro Asp Phe Leu Val Cys Gly Asp Asp
50 55 60

Leu Val Val Val Ala Glu Ser
65 70

<210> 287
<211> 71
<212> PRT
<213> hepatitis C virus

<400> 287

Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
1 5 10 15

Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
20 25 30

Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
35 40 45

Lys Ala Ala Gly Leu Arg Asn Pro Asp Phe Leu Val Cys Gly Asp Asp
50 55 60

Leu Val Val Val Ala Glu Ser
65 70

<210> 288
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 288

Ser Thr Val Thr Glu His Asp Ile Arg Thr Glu Glu Glu Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Ala Ile Ser Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Ile Gly Gly Pro Met Tyr Asn Ser Lys Gly Leu Gln
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr Ser Phe

50

55

60

Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Lys Ala Ala Ser Arg Ala
65 70 75 80

Ala Gly Leu Lys Asp Pro Ser Phe Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Val Ser Glu Ser Cys Gly Val Glu Glu Asp Arg Ala Ala Leu Arg
100 105 110

Ala

<210> 289
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 289

Ser Thr Val Thr Glu Lys Asp Ile Arg Val Glu Glu Glu Val Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Ala Ile Thr Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Lys Gly Asp Leu
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ser Ala Ala Ile Lys Ala
65 70 75 80

Ala Gly Leu Arg Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Asp Gly Val Glu Glu Asp Lys Arg Pro Leu Gly
100 105 110

Ala

<210> 290
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 290

Ser Thr Val Thr Glu Lys Asp Ile Arg Val Glu Glu Glu Val Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Arg Ala Ile Thr Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Arg Gly Asp Leu
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ser Ala Ala Ile Arg Ala
65 70 75 80

Ala Gly Leu Arg Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Asp Gly Val Glu Glu Asp Lys Arg Ala Leu Gly
100 105 110

Ala

<210> 291
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 291

Ser Thr Val Thr Glu Lys Asp Ile Arg Val Glu Glu Glu Val Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Val Ile Thr Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Lys Gly Asp Leu
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ser Ala Ala Ile Arg Ala
65 70 75 80

Ser Gly Leu Arg Asp Cys Thr Met Leu Val Tyr Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Asp Gly Val Glu Glu Asp Lys Arg Ala Leu Gly
100 105 110

Val

<210> 292

<211> 113

<212> PRT

<213> hepatitis C virus

<400> 292

Ser Thr Val Thr Glu Lys Asp Ile Arg Val Glu Glu Glu Val Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Ala Ile Thr Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Lys Gly Asp Leu
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ser Ala Ala Ile Arg Ala
65 70 75 80

Ala Gly Leu Arg Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Asp Gly Val Glu Glu Asp Lys Arg Ala Leu Gly
100 105 110

Ala

<210> 293
<211> 113
<212> PRT
<213> hepatitis C virus

<220>
<221> MISC_FEATURE
<222> (110)..(110)
<223> Xaa represents any amino acid

<400> 293

Ser Thr Val Thr Glu Arg Asp Ile Lys Val Glu Glu Glu Val Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Val Ile Ala Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Lys Gly Asp Leu
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Met Thr Cys Tyr Leu Lys Ala Ser Ala Ala Ile Arg Ala
65 70 75 80

Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Gly Gly Val Glu Glu Asp Lys Arg Xaa Leu Gly
100 105 110

Ala

<210> 294
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 294

Ser Thr Val Thr Glu Arg Asp Ile Arg Val Glu Glu Glu Val Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Thr Arg Lys Val Ile Ser Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Arg Gly Asp Leu
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Leu Thr Cys Phe Leu Lys Ala Thr Ala Ala Thr Lys Ala
65 70 75 80

Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Asp Gly Val Glu Glu Asp Arg Arg Ala Leu Gly
100 105 110

Ala

<210> 295
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 295

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Glu Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Val Ile Ser Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Tyr Asn Ser Lys Gly Asp Leu
35 40 45

Cys Gly Gln Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Val Thr Cys Tyr Leu Lys Ala Val Ala Ala Thr Arg Ala
65 70 75 80

Ala Gly Leu Lys Gly Cys Ser Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Gly Gly Val Glu Glu Asp Ala Arg Ala Leu Arg
100 105 110

Ala

<210> 296
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 296

Ser Thr Val Thr Glu Arg Asp Ile Arg Val Glu Glu Glu Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Val Ile Ser Ala Leu Thr
 20 25 30

Glu Arg Leu Tyr Lys Gly Gly Pro Met Tyr Asn Ser Lys Gly Asp Leu
 35 40 45

Cys Gly Leu Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
 50 55 60

Gly Asn Thr Val Thr Cys Tyr Leu Lys Ala Thr Ala Ala Thr Arg Ala
 65 70 75 80

Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Val Ile Ala Glu Ser Gly Gly Val Glu Glu Asp Ala Arg Ala Leu Arg
 100 105 110

Ala

<210> 297
 <211> 113
 <212> PRT
 <213> hepatitis C virus

<220>
 <221> MISC_FEATURE
 <222> (22)..(22)
 <223> Xaa represents any amino acid

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa represents any amino acid

<220>
 <221> MISC_FEATURE
 <222> (24)..(24)
 <223> Xaa represents any amino acid

<400> 297

Pro Thr Val Thr Glu Arg Asp Xaa Arg Val Glu Glu Glu Val Tyr Gln
1 5 10 15

Cys Cys Asn Leu Glu Xaa Asp Xaa Arg Lys Val Ile Asn Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Lys Gly Asp Leu
35 40 45

Cys Gly Ile Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Thr Ala Ala Thr Arg Ala
65 70 75 80

Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Ile Gly Ile Asp Glu Asp Lys Gln Ala Leu Arg
100 105 110

Thr

<210> 298

<211> 113

<212> PRT

<213> hepatitis C virus

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> Xaa represents any amino acid

<220>

<221> MISC_FEATURE

<222> (109)..(109)

<223> Xaa represents any amino acid

<220>
<221> MISC_FEATURE
<222> (111)..(111)
<223> Xaa represents any amino acid

<400> 298

Ser Thr Val Xaa Glu Arg Asp Ile Arg Thr Glu Gly Glu Val Tyr Gln
1 5 10 15

Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Val Ile Thr Ala Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Phe Asn Ser Lys Gly Asp Leu
35 40 45

Cys Gly Gln Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Phe
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Thr Ala Ala Thr Arg Ala
65 70 75 80

Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Ala Gly Val Glu Glu Asp Pro Xaa Thr Xaa Arg
100 105 110

Pro

<210> 299
<211> 74
<212> PRT
<213> hepatitis C virus

<400> 299

Val Tyr Gln Cys Cys Asn Leu Glu Pro Glu Ala Arg Lys Ala Ile Thr
1 5 10 15

Ala Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Lys
20 25 30

Gly Asp Leu Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr
35 40 45

Thr Ser Phe Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Thr Ala Ala
50 55 60

Ile Arg Ala Ala Gly Leu Arg Asp Cys Thr
65 70

<210> 300
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 300

Ser Thr Val Thr Glu His Asp Ile Met Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15

Ser Cys Asp Leu Gln Pro Glu Ala Arg Ala Ala Ile Arg Ser Leu Thr
20 25 30

Gln Arg Leu Tyr Cys Gly Gly Pro Met Tyr Asn Ser Lys Gly Gln Gln
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Met
50 55 60

Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Leu Ala Ser Cys Arg Ala
65 70 75 80

Ala Arg Leu Arg Asp Cys Thr Leu Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Ala Ile Cys Glu Ser Gln Gly Thr His Glu Asp Glu Ala Ser Leu Arg
100 105 110

Ala

<210> 301
<211> 113
<212> PRT
<213> hepatitis C virus

<400> 301

Ser Thr Val Thr Glu His Asp Ile Met Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15

Ser Leu Tyr Leu Gln Pro Glu Ala Arg Val Ala Ile Arg Ser Leu Thr
20 25 30

Gln Arg Leu Tyr Cys Gly Gly Pro Met Tyr Asn Ser Lys Gly Gln Gln
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Met
50 55 60

Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Leu Ala Ser Cys Arg Ala
65 70 75 80

Ala Lys Leu Gln Asp Cys Thr Leu Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Ala Ile Cys Glu Ser Gln Gly Thr His Glu Asp Lys Ala Ser Leu Arg
100 105 110

Ala

<210> 302
<211> 13
<212> PRT
<213> hepatitis C virus

<400> 302

Ser	Ala	Gly	Thr	Gln	Glu	Asp	Ala	Ala	Ser	Leu	Arg	Val
1				5					10			